THIS WEEK'S National Petroleum NEWS

Index to Coming Meetings

Independent Oil Men's Association of New England: Fall River, Mass., Aug. 14; Providence, R. I., Sept. 11; Worcester, Mass., Oct. 9.

North American Gasoline Tax Conference, Book-Cadillac Hotel, Detroit, Mich., Aug. 7, 8, and 9.

American Petroleum Institute division of development and production engineering, Texas-Louisiana-Arkansas district, Galvez Hotel, Galveston, Tex., Sept. 5, 6.

American Chemical Society, Petroleum Division, Minneapolis, Minn., beginning Sept. 9.

National Petroleum Association, Hotel Traymore, Atlantic City, N. J., Sept. 18, 19, 20.

Ohio Petroleum Marketers Association, Deshler-Wallick Hotel, Columbus, O., Sept. 18, 19.

Rocky Mountain Oil & Gas Association, Montana division, Calgary, Alta., Sept. 18, 19, 20.

National Safety Council, Petroleum Section, Congress Hotel, Chicago, Sept. 30, to Oct. 5.

International Petroleum Congress, Tulsa, Oct. 5 to 12.

Big Four State Jobbers (Missouri, Kansas, Nebraska and Iowa), Kansas City, Mo., Oct. 15, 16, 17.

Independent Oil Men of America, Stevens Hotel, Chicago, Oct. 21, 22, 23.

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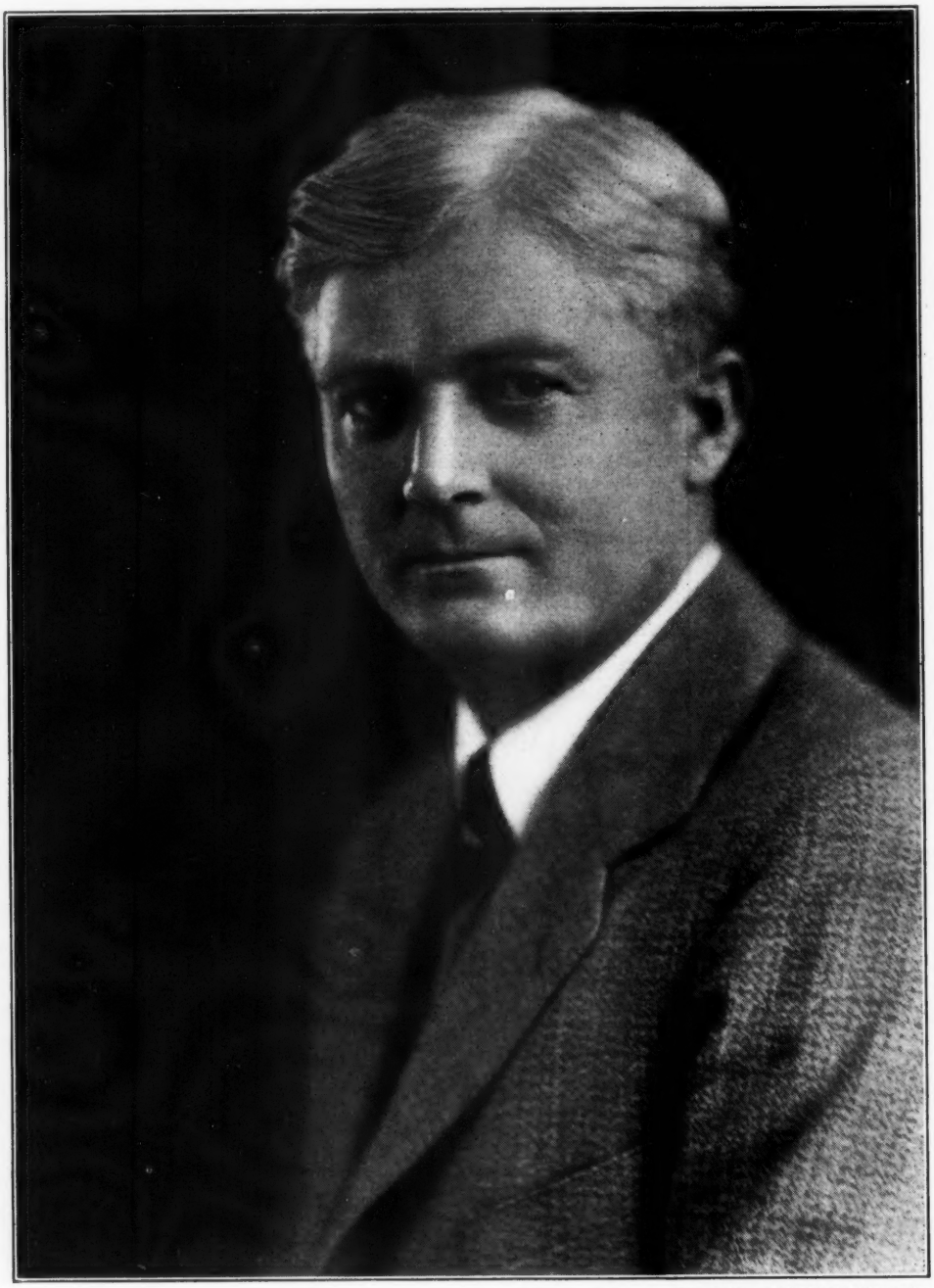

—Photo by WATTON STUDIO

L. H. PRICHARD found the law business a convenient means of access to the executive chair of oil company interests. He is president of the Anderson-Prichard Oil Corp., and the Col-Tex Refining Co., both with headquarters in Oklahoma City. He graduated from Mississippi College and Milsap College, of Jackson, Miss., came to Oklahoma City in 1909 and practiced law until 1915.

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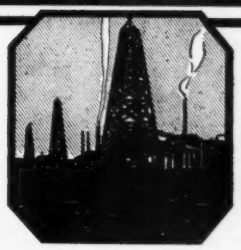

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A. P. I. Directors Approve Code; Urge Adoption by Aug. 31

By Roger B. Stafford
N. P. N. STAFF WRITER

By Telegraph

NEW YORK, July 30

THE code of marketing practices as issued by the Federal Trade Commission July 25, was unanimously recommended to the petroleum industry today by the board of directors of the American Petroleum Institute to be effective as of August 31, 1929. The board adopted a set of resolutions providing for a committee on interpretation of the code and continuing the regional committees on the code appointed a year ago.

The Institute also proposes that complaints be not laid with the trade commission by competitors against other marketers whom they believe are violating provisions of the code, unless all efforts for amicable settlements or agreements have been exhausted.

State sub-committees are to be appointed to propagate knowledge of the code's rules among all parties engaged in selling petroleum products and to act as committees of conciliation in cases of disputes.

The sub-committees on conciliation idea is the adaptation in another form of rule 19 of the code as adopted at St. Louis which rule was thrown out by the trade commission. This rule provided for the reporting of the chairmen or vice-chairmen of the Institute's regional committee on offenses against code rules.

The Institute will not participate in any complaints filed with the commission. All complaints must be filed and prosecuted by individuals or competitive companies.

The resolution was adopted after a discussion of two and one-half hours. Perhaps the chief controverted point was the definition of commercial accounts. After the meeting Col. H. T. Klein, chief counsel, The Texas Co., and a member of the Institute committee that formally presented the St. Louis code to the commission, said a commercial account was any vehicle that carried a commercial license tag or that was licensed to transport passengers or goods by a public commission or licensing officer. However, further definition is expected from the committee on interpretation, particularly in the case of taxicabs in states where taxis operate under regular passenger car licenses.

The resolution as adopted follows:

Whereas, the American Petroleum Institute, on June 29, 1928, initiated a movement to effect agreement upon a national code of practices for marketing refined petroleum products and on Dec. 5, 1928, its board of directors, by unanimous vote of all present, approved the complete text of a code for recommendation to the Federal Trade Commission for its sanction, and

Whereas, a trade practice conference and public hearing for the petroleum industry was held at St. Louis, Mo., Feb. 11, 1929, under the auspices and presided over by the chairman of the Federal Trade Commission which conference adopted and approved, without substantial change, the code above referred to, and

Whereas, the Federal Trade Commission, on July 25, 1929 announced its action and approval of the following code which conforms substantially to the recommendation made by the board of directors of the Institute and by the trade practice conference:

(All provisions of the code of practices as promulgated by the Federal Trade Commission were published on pages 20 and 21 of the July 24 issue of NATIONAL PETROLEUM NEWS and hence are not repeated here.)

Therefore, be it resolved that the board of directors of the American Petroleum Institute in session in

By Telegraph

NEW YORK, July 30.—The American Petroleum Institute committee that will interpret the code of ethics to the oil industry consists of Col. H. T. Klein, The Texas Co.; E. S. Hall, attorney for Standard Oil Co. of New Jersey; Roy B. Jones, Panhandle Producing & Refining Co., Chairman of the Institute's general committee on the code; W. R. Boyd, Jr., executive vice president of the Institute, and one member yet to be appointed.

The committee July 30 asked oil companies to submit questions about application of the code within the next five days and a preliminary report on the questions will be submitted about three days thereafter. Speed in action has been made possible by existing interpretations of rules that were not changed by the Federal Trade Commission.

The code with interpretations appended rule by rule will be published in pocket-size book form by the Institute.

New York, July 30, 1929 hereby approves the code of practices for marketing refined petroleum products as authorized by the Federal Trade Commission, and believing the same to be a reasonable declaration of fair and good practice and in the interest of the industry and the public, recommends their acceptance as of Aug. 31, 1929 by the units engaged in refining and marketing petroleum products and urges upon all interested and concerned honest adherence to, and faithful observance of, the provisions of said code.

Be it further resolved that the following plan of procedure now be followed by the American Petroleum Institute:

1.—A national committee on interpretation of the code, of five members, shall be appointed by the president. Such committee shall from time to time make and publish, for the information of the industry, technical interpretations of the various provisions of the code. Three members acting unanimously shall constitute a quorum.

2—The refining and marketing area of the United States is hereby divided into geographical regions, to wit:

PACIFIC Coast region; Washington, Oregon, California, Nevada and Arizona;

Rocky Mountain region: Montana, Idaho, Wyoming, Utah, Colorado and New Mexico;

Southwestern region: Texas, Arkansas and Louisiana;

Mid-Continent region: Oklahoma and Kansas;

Middlewestern region: Ohio, Wisconsin, Indiana, Minnesota, Michigan, North Dakota, South Dakota, Illinois, Missouri, Nebraska and Iowa;

Eastern region: Maine, New Hampshire, Rhode Island, New York, Pennsylvania, Maryland, Virginia, Tennessee, Mississippi, Alabama, Florida, Vermont, Massachusetts, Connecticut, New Jersey, Delaware, West Virginia, Kentucky, North Carolina, South Carolina, Georgia, and the District of Columbia.

3—The existing regional code of ethics committees for the six regions above defined shall be continued and the president is authorized to make any additions to the membership of such committees as may be desirable.

4—It shall be the function of each regional committee, either through its own activity direct or through state or such other appropriate sub-committees as the chairman of each regional committee may appoint, and without expense to the Institute:

(a) Through conferences, public meetings or personal contact, to undertake to see that every refiner and/or marketer of petroleum and/or its products in the region is informed of the code and understands its provisions.

(b) To urge every such refiner and/or marketer doing business in the region to accept and honestly and faithfully observe the provisions of the code.

(c) To urge such refiners and/or marketers promptly to advise the Federal Trade Commission in writing of acceptance of and intention to adhere to the provisions of the code. The chairman of each regional committee is authorized and urged to appoint promptly either the state sub-committees or a general or district sub-committee for his region, and such state or other sub-committees are urged, first, to devote their time and vigorous attention to the accomplishment of those objectives indicated in paragraphs (a), (b) and (c).

5—It is recommended that oil men or companies do not make complaints against competitors to the Federal Trade Commission without first having exhausted every amicable means of getting the competitor to follow the provisions of the code. To assist the industry in making interpretations and in adjusting complaints, each state sub-committee, or in the absence of a state committee, some other sub-committee designated by the regional committee, or local or district committee formed under the sub-committee indicated, is authorized to function as a "committee on conciliation" and the procedure shall be as follows:

(a) Disputes with respect to interpretation or complaints against violation of some provision of the code may be filed in writing by the disputants or the complainant with the chairman of the state sub-committee or the other sub-committee designated for the purpose. The sub-committee, acting as a committee on conciliation, may act upon the complaint and attempt to conciliate the competitors involved and obtain strict adherence to the provisions of the code.

(b) If the dispute be over the interpretation of some provision of the code, the chairman of the sub-committee on conciliation may report the facts to the executive vice president of the Institute, who shall refer the case to the national committee on interpretation which should promptly make the interpretation.

A brief statement of the facts and the interpretation of the committee shall be published in the Institute's bulletin for the information of the industry.

(c) If the complaint be against a competitor for violation of any provision of group 1 of the code and the conciliatory effort of the sub-committee on conciliation fails, its chairman may transmit to the executive vice president of the Institute a full and complete statement of the facts and a copy of such statement shall be by him mailed to the Federal Trade Commission for its information.

(d) If the complaint be against a competitor for violating any rule or all the rules in group 2 of the code, and the conciliation effort of the sub-committee on conciliation fails, with the approval of the sub-committee its chairman may submit (through the executive vice president of the Institute) to the national committee on interpretation a full statement of all the facts with the recommendation that in a marketing area, which shall be specifically defined, operation of the group 2 provisions of the code may be suspended, and if such recommendation is approved by the national committee on interpretation, it shall thereupon take effect and the group 2 rule or rules of the code in the specifically defined marketing area shall be temporarily suspended until such time as sub-committee on conciliation shall report that the violator or all important competitors in such area are conforming to the rules as set forth in group 2.

6.—No formal complaint shall be filed in the name of or prosecuted on behalf of the Institute with the Federal Trade Commission against any person or company. Formal complaints, if any, should be filed and prosecuted by individuals or competitive companies.

THE efforts of oil company representatives on the board to clarify points in the code that affect their contracts forms took considerable time. Col. Klein because of his familiarity with the ideas back of the code and his contacts with the trade commission was kept busy interpreting points.

The lease and commission form of filling station operation as practiced by the Standard of Indiana was declared to be permissible under the code. Under this plan the Standard employs the owner of the station which it has leased and controls the resale price of gasoline.

The lease and license form of contract covering garage and curb pumps as it is employed by The Texas Co., Sinclair Refining Co. and others in which the resale price of gasoline cannot be controlled, was declared forbidden by the code. Representatives of several companies that operate with this general form of contract announced they would abandon that method of controlling gasoline outlets.

Question of loaning air compressors was brought up but the code, it was pointed out, prohibits such practice which not long ago was prevalent in the southeastern states. The practice there has been discontinued voluntarily, the directors were told, although discontinuance froze a lot of business with the companies that had already loaned compressors to dealers.

Interpretation of the rule requiring posting of prices is expected to give

the committee much difficulty. W. T. Holliday, president Standard Oil Co. of Ohio, said it was particularly perplexing in Ohio where gasoline is sold on a delivered basis in competition with gasoline from several other refining districts. No solution was offered today, but work will be done on this question by the committee. Belief was general that the commercial account question will be at the forefront of marketing problems long after the code is generally adopted by the committee.

Walter C. Teagle, president, Standard Oil Co. of New Jersey and Mr. Holliday blamed commercial accounts for many marketing troubles. They said they would like to see all commercial discounts scrapped. A counter opinion was expressed by R. D. Leonard, vice president, Atlantic Refining Co., who believes the system of discounts to large users is economically sound. It is expected that although the code does not prohibit commercial discounts that they will be discontinued in some marketing territories.

Men present today were: E. B. Reeser, Barnsdall Corp.; W. R. Boyd, Jr., American Petroleum Institute; W. M. Irish, Atlantic Refining Co.; J. Howard Pew, Sun Oil Co.; Edward Prizer, Vacuum Oil Co.; H. B. Earhart, White Star Refining Co.; J. S. Carroll, Johns-Manville Co.; W. C. Teagle, Standard Oil Co. of New Jersey; Henry M. Dawes, Pure Oil Co.; J. C. Van Eck, Shell Union Corp.; Herbert L. Pratt, Standard Oil Co. of New York; E. S. Hall, Standard Oil Co. of New Jersey; H. T. Klein, The Texas Co.; W. S. S. Rodgers, The Texas Co.; R. D. Leonard, The Atlantic Refining Co.; Fayette B. Dow, American Petroleum Institute; C. G. Sheffield, Standard Oil Co. of New Jersey; H. D. Frueauff, Henry L. Doherty & Co.; Roy S. Osborn, Sinclair Refining Co.; J. W. Carnes, Sinclair Refining Co.; C. T. Hatmaker, Pan American Petroleum & Transport Corp.; Amos Ball, Standard Oil Co. of Indiana; Raleigh Warner, Pure Oil Co.; A. E. Watts, Sinclair Refining Co.; E. L. Shea, Tidewater Associated Oil Co.; H. A. Wilkinson, Standard Oil Co. of New York; W. T. Holliday, Standard Oil Co. of Ohio; and W. G. Violette, Standard Oil Co. of Kentucky.

Group II Rules of Code Depend Mostly On Good Faith for Enforcement

WASHINGTON, July 25

RULES that are classified as Group II in the code of ethics for the marketing of petroleum products, are regarded by the Federal Trade Commission as a moral contract among the members of the petroleum industry although they are not at present enforcible by law except under certain aggravating conditions or circumstances. These conditions or circumstances would have to be decided in each particular case.

The Group II rules or resolutions are those about which there is skepticism as to what value they may have in eliminating practices which the industry has expressed itself as being unfair but the commission, in approving them, has implied its belief that they will at least curb competitive methods which the industry regards as unfair.

"Group I rules relate to practices which the commission looks upon as violations of law," said George McCorkle, first assistant director of trade practice conferences. "On proper information the commission would proceed against the offender either under Section 5 of the Federal Trade Commission act or the Clayton law.

"As to Group II rules, the commission recognizes them as being expressions of the industry of what are unfair trade practices but as to the illegality of these practices the commission expresses no opinion. Under certain conditions or circumstances they might be unfair methods of competition. As to that the commission simply passes the resolutions with approval as expressions of the industry. Generally speaking they are not enforcible.

"When it comes to the attention of the commission that a person, firm, or corporation is violating Group II rules, the commission will call the violation to the attention of the offender and offer its good offices to induce the offending party to stand by the obligation entered into when the rules were signed.

"At present the commission is going after Group II offenders in other industries whether they have signed or haven't signed a code agreement. The commission has made no distinction between signatory and non-signatory members of an industry."

Mr. McCorkle discussed the code with NATIONAL PETROLEUM NEWS in the absence from Washington of M. Markham Flannery, director of trade practice conferences, who assisted Chairman Edgar A. McCulloch of the commission in the conference at St. Louis, Feb. 11, 1929.

The commission last fall ruled in the cottonseed oil industry that a clandestine violation of a Group II rule was an unfair method of competition and therefore the offender could be prosecuted under Section 5 of the Federal Trade Commission act, the first sentence of which section is, "That unfair methods of competition in commerce are hereby declared unlawful."

In March, after there had been a change in the personnel of the commission, the clandestine rule was rescinded but Mr. McCorkle said the commission still regarded any stealthy violation of a Group II agreement as a reprehensible act whether or not it could be stopped by law.

The signing of the code, Mr. McCorkle asserted, was a pledge of good faith among the members of the industry, and that supporting of the rules which had been determined by the industry, would instill confidence that the signatory members hoped to operate on a high ethical plane.

The commission has no intention of harassing any member of any industry, he added, but it would strive to induce both signatory and non-signatory members of the industry to mend their methods whenever information was filed with the commission that Group II rules were being violated.

Whenever Group I rules are violated the commission must proceed against the offender if the unfair act has been committed in interstate commerce and is against the public interest. Under a ruling of March 17, 1925, and amended Sept. 17, 1928, the commission will "not entertain proceedings of alleged unfair practices where the alleged violation of law is a purely private controversy redressable in the courts, except where said practices substantially tend to affect the public."

MR. McCORKLE said that rebating was an unfair method of competition and proceedings could be entered against a person, firm, or corporation that practiced it. However, quantity discount agreements are not considered instruments of rebating because any refunding done under such instruments is for quantity purchases, a practice permitted under the law.

The code is applicable only to interstate commerce which, as defined in the Federal Trade Commission act, is: "Commerce among the several states or with foreign nations, or in any territory of the United States or in the District of Columbia, or between any such territory and another, or between any such territory

and any state or foreign nation, or between the District of Columbia and any state or territory or foreign nation."

The code would not be applicable to commerce that is wholly within any one state. That is intra-state commerce over which the federal government has no jurisdiction unless it affects the commerce in another state or between other states.

A petroleum marketing company whose business is entirely within one state would not be amenable to the provisions of the code, according to unofficial opinions in Washington, and there is doubt in the cases of large companies which operate in several states as to just where interstate commerce becomes intra-state commerce. The breaking point has been referred to as a twilight zone which is indistinct.

OPINIONS vary as to the breaking point but the general opinion is that when an original shipment from one state comes to rest in another state and the original package—in the case of gasoline and other oils, a tank car—is broken up for distribution within the second state, that the distribution is an intra-state act which would not be affected by the code of ethics.

However, a decision of the United States Supreme Court brings up a perplexing question. This decision was in the case of Swift & Co., appellant in error, vs. the United States (196 U. S., 375). In the proceedings in the lower court Swift & Co. set up as a defense that inasmuch as the company shipped meat to its various branch agencies in other states for sale by such branches, the sale by the agents was not a transaction in interstate commerce. The lower court held that such sales were in interstate commerce.

The decision of the Supreme Court, according to William A. McAfee, general counsel of the Standard Oil Co. of Ohio, seems to indicate that only such sales as were made in the original packages were in interstate commerce. But Justice Holmes seemed to have left the door open by saying "nor do we mean to intimate that the statute under consideration (the Sherman law) is limited to that point (that is, that only sales by agents in original packages are reached by the law)."

Justice Holmes also made this statement: "But we do not mean to imply that the rule which marks the point at which state taxation and regulation becomes permissible necessarily is beyond the scope of interference by Congress for the protection of commerce among the states."

Some lawyers interpret this statement as meaning that Congress or federal agencies may interfere with what seems to be intra-state commerce when such interference is deemed necessary to protect interstate commerce. In other words, an oil marketing company operating entirely within one state could not indulge in practices which would affect the lawful business of other oil marketing companies which are in interstate commerce.

Cease and desist orders have been issued to offenders against rules in codes of ethics in other industries but so far, Mr. McCorkle said, no cases had been carried to a United States circuit court of appeals to which decisions of the commission under the act which created it and the Clayton act can be carried.

A great many cases brought to the commission's attention are settled by stipulation; that is, the offender agrees to discontinue the unfair practice. Should the offender refuse to cease a practice that is regarded as unfair, an information is filed with the trade practice conference department of the commission.

The case is investigated by the chief examiner's department of the commission and a board of review goes over the examiner's report and may recommend or decline to recommend the entering of a formal complaint. If a complaint (comparable to a warrant) is entered against the alleged offender, the commission's chief counsel or his assistant prosecutes the complaint before the commission which sits as a judiciary body.

If the commission finds that unfair trade practices have been indulged in, it issues a cease and desist order.

The foregoing proceedings apply to Group I rules of codes but not to Group II rules which, except when attended by unusual circumstances or conditions, are enforcible by moral suasion alone.

The commission's attitude toward the whole trade practice subject is set forth in its "Rules of Practice" as follows:

"THE trade practice conference affords, broadly stated, a means through which representatives of an industry voluntarily assemble, either at their own instance or that of the commission, but under the auspices of the latter, for the purpose of considering any unfair practices in the industry, and collectively agreeing upon and providing for their abandonment in cooperation with and with the support of the commission.

"This procedure deals with an industry as a unit. It is concerned solely with the practices and methods, not with individual offenders. It regards the industry as occupying a position comparable to that of 'friend of the court' and not as that of the accused. It wipes out on a given date all unfair methods condemned at the conference and thus places all competitors on an equally fair competitive basis. It performs the same function as a formal complaint without bringing charges, prosecuting trials, or employing any compulsory process, but multiplies results by as many times as there are members in the industry who formerly practices the methods condemned and voluntarily abandoned.

"The beneficial results of this form of procedure, are now well established, and the commission is always glad to receive and consider requests for the holding of trade practice conferences."

The commission is preparing a digest of court decisions on unfair methods of trade but this digest will not be ready for publication for some months.

Believe I.T.I.O. Well Has 34,000 Barrel Capacity

(By Telegraph)

TULSA, July 30.—The week opened in Oklahoma with developments that add to the current crude oil supply. In the Oklahoma City pool the performance of the Indian Territory's sensational Johnson well which came in late Friday showed that a high peak of production may be reached if more of this caliber are completed.

For the 24 hours ended Sunday morning it made 5,270 barrels pinched down and for the succeeding 24 hours it made 3,464 being shut in off and on during this time and really producing only nine hours total time. Field men say that unrestricted the well would do 34,000 barrels.

The same company No. 1 Button SW corner of 19-11-2 practically an inside location has been drilled to total depth of 6532 feet and for 24 hours ended Monday morning made 5713 barrels. The field produced Sunday and Sunday night 31,500 barrels with its potential estimated at more than 40,000.

Magnolia Petroleum Co., opened a new pool in central Lincoln county, near Chandler. Its No. 1 Decker, SE SW SE of 8-14-4E found first oil at 4935 feet and at 4970 began flewing. It made 1475 barrels in 18 hours of 42 gravity oil. It is bebieved to be producing from the Simpson formation just above the Wilcox sand. It is eight miles west of the Davenport pool.

The Burgher Oil and Gas Co., test in Ellis county, Kans., was Tuesday morning standing with 2600 feet of oil in the holes from pay topped at 3408 feet, and drilled in 12 feet. It is in the SW NW of 20-11S-17W and is about three miles north of the recent strike of the Phillips Petroleum Co., whose well is shut in awaiting facilities for moving the crude.

Exporters Consider Stabilizing Prices Of Gasoline Over Period of Years

LONDON, July 29

THE discussions being held by representatives of the Export Petroleum Association of the United States with Sir Henri Deterding, general managing director of the Royal Dutch-Shell group, and Sir John Cadman of the Anglo-Persian Oil Co. about the export price of American gasoline, are ranging from the world production of crude oil to the retail price of motor fuel.

The present inclination of the conferees is toward an attempt to stabilize prices over a period of years. How this may be accomplished is the leading topic that is before the conference which has held several meetings since the American commission reached England a fortnight ago.

An important influence toward steadying gasoline prices, delegates are inclined to believe, is the elimination of waste, not only in the oil fields but in the sales divisions. The American oil men here admit there is needless competition with filling stations and consequently a great expense involved in the distribution of petroleum products.

It is said here, although no announcement has been made, that efforts will be made in the United States to curtail this method of competition despite the Sherman law and similar efforts are expected to be made in Europe.

The view prevails here that saving overhead costs will be equivalent to higher prices but little headway has been made toward a solution of the major subject, and export price.

(The reference to the effort to curtail filling station competition, made in the London cablegram, probably is to the code of marketing practices which was issued by the Federal Trade Commission July 25. However, the code has nothing to say in regard to the number of service stations, only as to their leasing, and it is doubtful that any American oil company would rashly do anything that is contrary to the anti-trust laws, either national or state.—Ed.)

* * *

CLEVELAND, July 29.—Secrecy surrounds the oil conferences in London, according to a July 25 wireless dispatch to the *New York Times*, but it is learned in London there is possibility of a division of world market territory. This report is in accord with a dispatch to NATIONAL PETROLEUM NEWS two weeks ago that revamping of the world's gasoline shipments would be attempted.

The Times also printed a cablegram from Paris in which it was said the European nations that produce no oil, notably France, Germany, Italy and Spain, are greatly concerned over the possible outcome of the London conferences.

Concerning the international aspect of the oil situation, the writer of the Times' Paris dispatch had this to say:

"The French government has long anticipated the formation of a so-called Anglo-American oil combination, and for some months the Foreign Office has been feeling out other non-producing countries with a view to a mutual defense of their interests.

Just how far these informal conversations have gone is not known. It is probable, however, that more pressing questions, such as the debt accords and reparations, have forced the oil matter to one side, although with the opening of the new English conversations the French are again turning their attention to the international oil situation.

According to French impression—and this feeling is shared by other non-producers—the British and Americans would evolve some scheme for the limiting of production throughout the world. This would be followed by a rise in the export price, which, in turn, would mean dearer gasoline for the consumers in the Continental countries.

"Another point of irritation is the report that the British and the Americans intend to partition the European markets, alloting zones of influence to all members in agreement. And while the French and other Continental countries realize their present dependence upon the foreign companies, they resent an arrangement in regard to their respective countries which does not take into consideration their own ideas and needs.

"This criticism may be unjustified, however, if rumors that the French, German and other Continental oil officials were asked to attend the London sessions prove correct.

"Still another source of resentment in France and, to a somewhat lesser degree in other Continental countries, is the disillusionment over the development of the Mosul oil fields. While official quarters have been aware of the situation, the public is just being informed, through such influential newspapers as the Petit Parisien, that the hopes for freeing France from foreign oil control by means of the oil to be taken from the Mosul must be set aside for some years to come.

"Under the San Remo accord of 1920, France received a little less than one-quarter interest in all the oil to be taken from the Mosul fields. Investigations disclosed the fact that this would be sufficient to take care of practically the entire French consumption. Since then, however, no progress has been made toward the construction of a pipe line to the Mediterranean port.

"Through a combination of their respective shares in the field, the British and American companies dominate the situation and, although plans for the pipe line have been drawn up, the French are convinced it is the intention of the Anglo-American interests to delay indefinitely the working of the Mosul field.

"This is right in line with the Anglo-American ideas of curtailment of world production and thus the French ambitions for securing an independent oil source and, possibly, the playing of an important role as a Continental producer have been seriously thwarted, if not shattered.

"With this in mind, it is the intention of the government to concentrate on the development of the national refining industry, an operation which would, in a measure, limit the control of the market by American and British companies.

"Efforts of the Compagnie Francaise des Petroles, organized originally to exploit the French share in the Mosul fields, are now being directed toward the creating of French oil refineries.

"The French think that the Americans and British will find it much more difficult to curtail effectively world oil production than to find a common ground for a friendly international agreement. The greatest stumbling-block to the limitations, it is asserted here, is the attitude of the American oil companies themselves."

Giving Credit

IT SHOULD have been announced in connection with the aluminum chloride paper by A. M. McAfee published on page 83 of the July 17 issue of NATIONAL PETROLEUM NEWS, that the paper was presented before the American Institute of Chemical Engineers in Philadelphia June 21 and it was published in NATIONAL PETROLEUM NEWS by special permission of the institute.

Oil Companies Report Improved Earnings So Far This Year

CLEVELAND, July 29

MOST of the oil companies that have published income statements for the second quarter and first half of 1929, show healthy gains over earnings in the corresponding periods of 1928.

The American Republics Corp., whose subsidiaries are equipped as well as oil companies, in the last half year turned from a loss of $88,361 to a profit of almost double that amount. Net profits of the Barnsdall Corp. increased 300 per cent, Beacon approximately 250 per cent, Sun Oil 50 per cent, and Union Oil more than 20 per cent.

Independent Oil & Gas Co. in the first half of 1928 lost $306,881 on its operations but had net profits of $3,635,055 in the first half of 1929. Mid-Continent Petroleum Corp. before deducting reserves showed a gain in income of more than $2,700,000 and Phillips Petroleum Co. a gain of almost $2,000,000.

Of 14 companies which report comparative figures for the two half years only one reported lower income this year than last. A comparison of the half years follows:

Half Year	1929	1928
American Republics	$164,713	*$88,361
Barnsdall Corp.	4,115,253	1,003,328
Beacon Oil	530,509	141,467
Houston Oil	779,422	726,843
Independent Oil	3,635,055	*306,881
Mid-Continent Petroleum	†‡5,987,398	†‡3,248,666
Phillips Petroleum	†8,510,807	†6,519,977
Pierce Petroleum	484,261	367,457
Prairie Pipe Line	10,975,000	.....
Rio Grande Oil	3,022,362	.....
Shreveport-El Dorado P. L.	104,301	149,888
Sun Oil	3,637,540	2,513,929
Superior Oil	135,260	*501,045
Texas Pacific Oil	†969,655	†717,150
Transcontinental Oil	‡1,715,822	‡422,966
Union Oil (approximate)	7,000,000	5,800,000

*Loss †Before depreciation and depletion. ‡Before federal taxes.

Of 12 companies that reported comparative figures for the second quarters of 1928 and 1929, only one reported lower net income this year. Following is a comparison of the second quarter reports:

Second Quarter	1929	1928
American Republics	$248,501	$163,368
Barnsdall Corp.	2,226,881	614,196
Beacon Oil	390,031	550,387
Houston Oil	434,275	388,980
Independent Oil	1,616,205	112,517
Mid-Continent Petroleum	†‡3,866,407	†‡2,216,275
Phillips Petroleum	†4,897,928	†3,414,886
Pierce Petroleum	453,139	401,723
Rio Grande Oil	1,759,037	.....
Superior Oil	122,735	*226,631
Texas Pacific Oil	†541,513	†323,070
Transcontinental Oil	‡1,188,271	‡493,612
White Eagle Oil	823,075	501,712

*Loss. †Before depreciation and depletion. ‡Before federal income taxes.

Frank Phillips, president of the Phillips Petroleum Co., issued a statement to stockholders summing up his company's operations and reviewing the petroleum situation. The statement follows:

"June earnings were at an annual rate of over $24,000,000. These earnings were due almost entirely to an increase in the variety of products made and sold by the company. Very little net profits have accrued from oil production the last year and a half, due to overproduction and consequent low prices.

"Our gross crude oil production approximates 50,000 barrels daily. The company owns over 1,200,000 acres, of which 80,192 acres have been fully or partially developed, the balance having large potentialities. The crude situation will adjust itself at some future date, which period no one can safely predict. When this time comes, our oil division should be one of the largest sources of income.

"The company is rapidly expanding various divisions, such as refining, retail marketing, natural gasoline, water plants, dry gas, liquefied gases, and oil and gas pipe lines. It is from these sources we expect our major profits under existing conditions. Capital expenditures made during the current year have not had time to reflect their full earning capacity.

"Our refinery at Borger, Texas, is being enlarged to 15,000 barrels daily. We have authorized the building of a Kansas refinery with a capacity of 5,000 barrels a day to use our own crude and to better serve our consuming markets in that division. Other refinery locations are under consideration for the utilization of a larger part of our additional crude supply.

"Recently Texas Corp., Skelly Oil, Columbian Carbon and Phillips organized Central States Natural Gas Co., which will pipe gas from Texas Panhandle to points in Nebraska, Iowa and other areas. This will give an additional market for our large gas reserves. The company now furnishes about 50 per cent of the gas required for the entire carbon black industry of the United States. We continue to maintain our position as the largest manufacturer of natural gasoline. The Philfuels and Philgas divisions are showing steady gains.

"General business conditions in the United States so far this year have been good, many industries showing substantial gains. The oil industry has kept pace with the general improvement and consumption of gasoline and oils has increased at a rapid rate. For the five months' period of this year total demand for petroleum and all products was increased 284,000 barrels daily, or 11 per cent over the same period of 1928.

"Total supply, which includes domestic production and imports, for the same period has shown an increase of 13.5 per cent. Total supply has exceeded total demand and storage has been increased, but due to the rapid rate of increase in consumption, the number of days' supply at the end of May this year amounted to 212 days, which compared with 221 days' supply on hand at the end of May, 1928.

"Even with the unfavorable weather conditions prevailing in the central states, consumption of gasoline in the United States was 20 per cent more in May of this year than in the same month last year, and for the five months' period the increase has amounted to 16.3 per cent. This estimated June rate of production and imports of petroleum exceed the demand by 4.6 per cent. All of this surplus, however, was in California, where large flush production was being developed, but this condition is expected to improve after Aug. 31, when the new gas conservation law becomes effective."

Curtis Robin Plane Uses Naturaline in Flight

TULSA, July 29.—The Curtis Robin plane which, when this was written, was still cruising around over St. Louis making all former endurance flights look like week end pleasure jaunts, was burning Naturaline, a natural gasoline product manufactured by The Naturaline Corp., a subsidiary of the Chestnut & Smith Corp. especially for airplane and motor boat engines.

The flight was arranged by the Curtis plane manufacturers and was designed primarily as a factory test. With this object in mind the Curtis officials called upon their laboratory to designate the fuel to be used, and Naturaline was selected.

The fuel then was bought by the Curtis company from the Shamrock Oil Co. of St. Louis, distributor of Naturaline in St. Louis and vicinity. The plane had been in the air almost a hundred hours before the Chestnut & Smith Corp. officials knew Naturaline was being used.

The Shamrock Oil Co. almost ran out of Naturaline and the Chestnut & Smith Corp. came to the rescue July 21 and 22 when it rushed a 1,000-gallon tank truck load of the fuel to St. Louis. The truck was new and the drivers did not push it beyond 30 miles an hour, but stops were made only for refueling and for brake band adjustment. The trip was completed just in time to save the flight.

This flight probably is the first one of its kind where some oil company has not furnished the gasoline free of charge.

Raise Ethyl Gas Anti-Knock Standard; Reduce Price of Ethyl Fluid

By Paul Truesdell
N. P. N. STAFF WRITER

CLEVELAND, July 29

TWO steps have been taken by the Ethyl Gasoline Corp. designed to improve both the anti-knock value and the volatility of the motor fuel sold the country over as Ethyl gasoline, and also the gasoline treated with Ethyl fluid but marketed under other brand names without the Ethyl trademark.

The first step is to increase the minimum quantity of Ethyl fluid to be used in treating gasoline to make the fuel meet a still higher standard of anti-knock value; the second is to slightly increase the percentage of the gasoline that must be distilled off at 158 degrees Fahr.

To offset the requirement that the refiner must add one quarter cubic centimeter per gallon more to the gasoline he treats, the Ethyl Gasoline Corp. has reduced the flat gallonage royalty charge and also the cost per cubic centimeter of the Ethyl fluid.

In a letter sent out by the Ethyl Gasoline Corp. to all its refiner licensees over the signature of E. W. Webb, president, the changes are explained as follows:

"The minimum distillation requirement at 158 degrees Fahr. for the base stock with which Ethyl fluid is to be mixed has been increased slightly. The anti-knock value of the new Ethyl standard will represent the addition of one-quarter cubic centimeter of tetraethy lead to the anti-knock value of our present standard. The minimum amount of lead to be mixed with one gallon of gasoline has been increased from three-quarters of a cubic centimeter to 1 cubic centimeter. The maximum remains at 3 cubic centimeters. Samples of this improved Ethyl standard from a knock standpoint will be supplied on request.

"We believe this increased anti-knock value is but keeping in line with improvements that have been made and are going on in the automotive and refining fields. You are doubtless aware of the fact that most automobile manufacturers have increased the compression of their cars within the past two years with consequent increased efficiency and economy.

"We, of course, should at least keep pace with developments that are so intimately associated with the business in which your company and ours are engaged.

"In improving our standard we are doing so not only at no additional cost to any customer, but to each there is a reduction in the unit cost per gallon of gasoline treated. This is accomplished through the reduction in gallonage charge from 0.7 cent to 0.6 cent and in the price of tetraethyl lead from 0.5 cent to 0.4 cent per cubic centimeter of lead. We attach a statement showing the relative cost under the existing standard and price, as compared with the new.

"The standard is to become effective on Aug. 15, 1929.

"As we view the anti-knock picture today and the trend of events, we think that the soundest foundation for the Ethyl business is a policy of gradually increasing our standard provided we make a proportional reduction in price to our customers, and to go a step farther—if we believe conditions will justify it—by reducing the price so that our customers will be able to meet such gradually increased standard at less cost.

"This will, obviously, be the more speedily realized by the enthusiastic backing and cooperation amongst those who are financially interested in the promotion of the sales of gasoline containing Ethyl fluid."

The volatility for the gasoline to be treated with Ethyl fluid is thus defined by the new contract.

From April 1 to October 1, not less than 8 per cent off at 158 degrees Fahr., end point not over 428 degrees Fahr. From October 1 to April 1, not less than 10 per cent off at 158 degrees Fahr., end point not over 428 degrees Fahr. In all other respects the gasoline shall at least conform in sulfur content and distillation characteristics to the present specifications for U. S. Motor fuel or any specifications that may hereafter be adopted for such fuel.

The present contract provides from April to October, 5 per cent off at 158 degrees Fahr., 20 per cent off at 212 degrees Fahr. and not over 428 degrees Fahr. end point. From October to April, 8 per cent off at 158 degrees Fahr., 22 per cent off at 212 and not over 428 degrees Fahr. end point.

The Ethyl anti-knock standard is an arbitrary standard not expressed in words, it having been found by the company technologists impossible to express it in terms of benzol equivalent, it is said. The clause in the contract covering the anti-knock requirement is as follows:

"The amount of Ethyl fluid to be

Cost of Treating 1 Gallon of Ethyl Gasoline

c.c. Ethyl Fluid per Gal.	¾	1	1¼	1½	1¾	2	2¼	2½	2¾	3
Cost on present basis minimum of ¾ c.c. of lead Gallonage .7c Lead .5c	1.075c	1.2c	1.325c	1.45c	1.575c	1.7c	1.825c	1.95c	2.075c	2.2c
Cost on new basis minimum of 1 c.c. of lead Gallonage .6c Lead .4c	.....	1.0c	1.1c	1.2c	1.3c	1.4c	1.5c	1.6c	1.7c	1.8c
Additional ¼ c.c. @ .4c means to each customer additional 1/10c per gallon treated	.....	.1c	.1c	.1c	.1c	.1c	.1c	.1c	.1c	.....
	.....	1.1c	1.2c	1.3c	1.4c	1.5c	1.6c	1.7c	1.8c	1.8c

Cost Comparison Between Old and New Standard

Old Standard .7c .5c	1.075c	1.2c	1.325c	1.45c	1.575c	1.7c	1.825c	1.95c	2.075c	2.2c
New Standard ¼ .6c Increase .4c	1.0c	1.1c	1.2c	1.3c	1.4c	1.5c	1.6c	1.7c	1.8c	1.8c
Difference in favor of customer with new basis and increased standard	0.075c	.1c	.125c	.15c	175c	.2c	.225c	25c	.275c	.4c

added to Buyer's (refiner's) gasoline shall be at least sufficient—as determined by Seller's (Ethyl Gasoline Corp.) laboratory—to make it equal in anti-knock value to the standard Ethyl gasoline as fixed by the Seller. Samples of said standard will be supplied buyer on request.

At the offices of the Ethyl Gasoline Corp. it was stated that any refiner or marketer whether an Ethyl licensee or not, can obtain a sample of the Ethyl standard by which he can compare the anti-knock value of the fuel he is making or selling, or any fuel he wants to test.

Reeser Says Tariff on Crude Would be Economic Error

CLEVELAND, July 29

E. B. REESER, president of the Barnsdall Corp. and the American Petroleum Institute, in an interview in the *New York Herald-Tribune*, declared that the imposition of a tariff on the importation of crude oil and petroleum products would be an economic error.

"The import duty is unsound economically and would defeat its own purposes as an agency for stiffening domestic prices and at the same time it would injure American export business," Mr. Reeser said.

The *Herald-Tribune's* account of the interview, corroborated by Mr. Reeser, follows in part:

"In regard to the domestic situation, he pointed out that the argument used by those favoring a duty of $1 a barrel on imports is that domestic prices could be increased to that extent. This view, however, did not take into consideration the fact that a tariff on foreign oil affording a premium to the domestic producer would have the inevitable effect of encouraging increased production, the chief problem of the oil industry and the very situation which the country's oil leaders are seeking to correct with every means in their power.

"In regard to the external situation, Mr. Reeser stressed that a tariff on imports would react to the disarrangement of foreign markets where American producers sell their oil and products at the present time. For example, the imports of oil from South America and other countries when confronted with the tariff barrier would be withheld and refined in the country of origin. This, in turn, would result in such refined products meeting American petroleum in an intensified competition in foreign markets.

"The retention and expansion of foreign trade by the American oil industry is vital at the present time, Mr. Reeser stressed.

"The president of the institute gave his opinion as firmly bullish on the domestic outlook. It was unfortunate, he said, that the general public —particularly the purchasers of oil securities and the users of motor fuels and lubricants—could see only one side of the picture. This side was the overproduction situation and presented a far from encouraging picture.

"'However, we must regard the vast increase in domestic consumption as likely to offset this overproduction, and with the immediate prospect of a lower output in California as soon as the state's gas conservation law goes into effect, the outlook becomes more rosy.'

"But, Mr. Reeser emphasized, the most concrete proof that the oil industry is prosperous and in as good shape financially as any other of the country's leading industries, is to be found in the earnings statements and balance sheets of the principal companies.

"Earnings and net profits of most of the large and well integrated units are showing the best half year's returns for a long period; dividends have been maintained and increased and yields on many of the leading oil stocks are far above those for the great bulk of industrial securities, Mr. Reeser claimed.

Preparing to Meet New Calif. Gas Law

LOS ANGELES, July 27.—As the time draws near for the enforcement of California's new state gas conservation law, many operators are seriously considering the problem of taking care of their excess gas.

Claude C. Brown, gas administrator for California, has indicated that the first legal test of the new law will probably be made in the Santa Fe Springs field, because of the large number of town-lot operators in that field who have shown that they are opposed to any form of conservation.

Wastage of natural gas in Kettleman Hills and Buttonwillow is expected to be ended with the completion early in August of the pipe line now being constructed by Pacific Gas & Electric Corp. from Buttonwillow to San Francisco, via Kettleman Hills. Northern California has a potential market for over 300 million cubic feet of gas per day at the present time. Applications for several additional pipe line projects are before the state railroad commission. If these are approved, it is expected that in excess of 500 million cubic feet of natural gas per day could be absorbed.

With Milham Exploration Co.'s Elliott No. 1 at Kettleman Hills flowing approximately 91 million cubic feet of gas per day, it is not difficult to imagine obtaining 10 times this amount from additional completions in this area and the surrounding areas of Dudley Ridge and Kreyenhagen Hills, which have demonstrated heavy gas pressure. A recent survey of the Kettleman Hills structure by five prominent New York geologists resulted in a report that the three domes in this area are capable of producing 400 million cubic feet of gas per day for 75 years.

To avoid confusion when the amendments to the conservation law become effective, R. D. Bush, state oil and gas supervisor, has sent copies of these changes to all California operators.

New Havoline Oils to Be Offered Next Week

WEST BADEN SPRINGS, Ind., July 29.—New wax-free motor oils made by the Govers process at the plant of the Indian Refining Co., Lawrenceville, Ill., will be offered to the motoring public for the first time next week. This was stated by Col. J. H. Graham, president of the Indian, in opening a 2-day sales convention of 400 representatives of the company here.

The men are from the 5-state territory comprising Michigan, Indiana, Illinois, Ohio and Kentucky in which the Indian operates its own service stations. All the dealers in this territory have been stocked with the new grades of Havoline oil. Colonel Graham described the manufacture of the new oils as a "distinct achievement in refinery progress and an epoch in the history of the Indian Refining Co."

Colonel Graham said that the new lubricating oil plant at Lawrenceville is the largest in the world for paraffine base oils; that there is no blending in this process—it is a straight product, made from a topped Illinois and Kentucky crude oil. It is distilled under vacuum.

The sales force was also addressed by A. H. White, vice president in charge of sales; by Dr. F. X. Govers, after whom the process is named; by B. H. Anglin, vice president in charge of manufacturing, and by Dr. Frank Fritts, vice president. J. E. Lockhart, lubrication engineer, pointed out the specifications of the wax-free Havoline oil, and their comparison with competitive brands now in use.

Now This Exposition Has a Way About It

By Lawrence E. Smith
N. P. N. STAFF WRITER

TULSA, July 27

"NOW," said Mr. Way, "I think you should have a few statistics."

"Must you proceed?" asked his audience of one, mopping a brow that became no cooler while standing beside a steel building on the International Petroleum Exposition grounds.

"There are now," said Mr. Way, just as though there had been no interruption, "213 exhibitors waiting for the word to go and long before time for the Exposition to open which, if you insist on knowing, is Oct. 5, there will be perhaps 50 more.

"We have no inside space left and we are trying with whatever finesse we have, to buy back a little from the folks who have bought several booths. Of course, that is their space and if they want to keep it all they have every right in the world to do it. We are just trying to take care of some deserving people who didn't get under the wire in time. We still have some outside space and it looks as though some exhibits that should be inside will go into the open lots.

"If you want more statistics," Mr. Way went on—

"Suppose you write them out and mail them to me at my winter address," retorted his audience. "No hurry at all and how about going back to town for a limeade."

"Let's stay a while, I want to see what we are doing," said the general manager of the Exposition. "If you were as interested in this thing as I am you wouldn't notice the heat. You know I managed quite a few exhibits for the Natural Gas Association years ago. Always before I had to write and ask people to take space. Now they write and ask what we have for them. It's quite an interesting job. It has grown and grown until it is the outstanding event of the year for the manufacturers of equipment and for the purchaser. No sales talk is needed any more."

Mr. Way, left, finds out how a certain bit of work is coming on

MR. WAY, William B., to be specific, is managing the Exposition for the first time. He is an old hand at the business, though. He put on seven exhibits for the old Natural Gas Association, of which he was secretary and in addition secretary of the Natural Gas Supply Men's Association.

The biggest of these shows was in Cleveland, in 1924, when the gigantic Convention Hall was packed so full of engines, compressors, drilling and producing equipment and the multitude of smaller items used in the gas distributing field, that there was scarcely room enough left in the building to hold the convention.

Mr. Way left the gas association about three years ago and engaged in the supply business. This year the Exposition officers looked about for a successor to J. Burr Gibbons, 1927 and 1928 manager, and their eye fell upon Mr. Way, who was doing quite nicely, thanks. It's hard to keep a postman from taking a walk, or a retired fireman from attending fires, so in the end old habit asserted itself and whether he intended to come or not he found himself in Tulsa before he could say Stanislaus Zbysczo. Here he is and he has bought a house just like he intends to stay around and watch the town grow.

One thing the exhibitors will find about this man Way he is easy to get along with. That doesn't mean that he promises everything under the sun. Many and many a time during the next two months he will have to refuse things, just because there is no way of granting the request. If it is humanly possible to let the exhibitor have his desire, it will be done.

But, whether the exhibitor gets what he asks for or not, he will go away highly pleased at the courtesy shown him and will be convinced that the disposition of his request was correct. And Mr. Way has a method of getting along with the customers without recourse to what is technically known as bull. Of course, in a golf game, he sometimes makes assertions that are not borne out by subsequent developments, but in business, never.

Well, to get back to what is going on, the Exposition management is going merrily ahead with its improvements to the grounds. An addition is being made to the Scientific and Technical building, consisting of an auditorium in which the Congress will be held. Now the Congress this year will be an important part of the show. Like the rest of the affair, it is being planned to add to the store of useful information of the oil man.

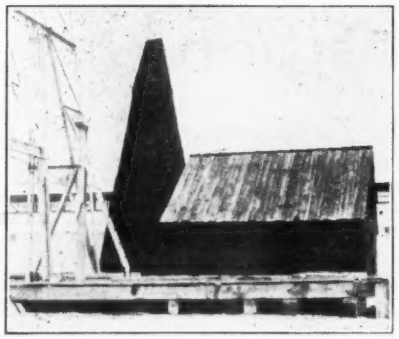
There will be no speeches on the value of this "irreplaceable natural

resource," or any vague generalizations. One day, for instance, is to be devoted to welding. Every man on the lease knows a little about welding, either from observation or practice, but he seldom has a chance to see the top-notchers in the business perform. That opportunity will be given this year. Other features of the Congress will be just as practical.

Just south of the southernmost building on the grounds is the parking space for exhibitors' cars. There is a door in the center of the building on that side and a bit of new construction under way now is a shelter over that door so the car can be driven to the door and the passengers can alight on dry ground in case it is raining.

Just south of the Scientific and Technical building is a grass plot of considerable size. It has been fenced in and the airplane exhibit will be placed therein. Mr. Way says the NATIONAL PETROLEUM NEWS was a little quick on the trigger in announcing the airplane exhibit, but now that it has been printed he is bound by it and that he will promote the best one possible. We have obtained his promise to have no endurance flying event in connection with the Exposition.

The restaurant question is one in which all Exposition exhibitors and many of the visitors are interested. The grounds are pretty far out, hence



The Drake well, which this year will be the headquarters for the Old Timers

the management has to figure on feeding everybody out there. The service last year was adequate and the same building will be occupied this year. It is being cleaned up, new sills are being placed under the flooring and a drainage system to keep water from standing under the building has been constructed. The "bar," operated last year for those who merely want a little snack at noontime, is being overhauled and bettered.

It's a trifle early, of course, to say what the finished product will look like. Some shifting about in the outdoor space is occurring. The Drake well, for instance, has been moved a few yards east and is to be fitted up as the Old Timers' Club. Each year the Exposition makes quite a fuss over the old boys who have let out screw and run the bailer since the days when the industry was young. The Drake well's interior is to be fitted with easy chairs and couches and the pioneers can sit in there and swap yarns early and late.

Offices of the Exposition will be maintained downtown until Sept. 1, when Manager Way and the staff will take up quarters in the office building on the grounds. Exhibits will start moving in Sept. 15. Meantime the thousand details—transportation, hotel arrangements, program—all the things that go unnoticed if they are done properly and arouse a storm of indignation if they are neglected, have to be looked after.

The management appoints committees to see that each phase of the show is handled. The committeemen pick out some willing worker of their number and he does it. For instance, your correspondent is notified that he is on the Old Timers' committee, along with quite a group of distinguished gentlemen. But there isn't a doubt in the world that Barney Horrigan will do all the work.

Mexico exported 2,210,907 barrels of crude in March, a slight increase over the preceding month. United States oil companies produced 1,329,318 barrels of this amount, and received 953,473 barrels, a gain of 31 per cent over February receipts.

Little Change in U. S. Gasoline Stocks

By Telegraph

NEW YORK, July 29

GASOLINE stocks at U. S. refineries on July 27 showed little change from those on hand July 20 according to reports gathered by the American Petroleum Institute. The Institute report for the past week covers plants with an aggregate capacity of 3,051,900 barrels or 91.4 per cent of the total capacity in the U. S.

Total gasoline stocks at reporting plants July 27 were 36,002,000 barrels, a reduction of only 60,000 barrels from those reported a week ago. At that time the report covered 90.9 per cent of the total U. S. capacity. Small reductions in stocks were made in most districts. In California there was an indicated increase of 666,000 barrels in stocks but part of this increase may be due to the fact that 97.8 per cent of the state's capacity is included this week as against 94.0 per cent the previous week.

Crude charges to stills during the week averaged 2,612,200 barrels per day which was 85.6 per cent of the rated capacity of plants reporting. The previous week crude charges averaged 2,584,200 barrels per day or 85.1 per cent of rated capacity.

Gas and fuel oil stocks on July 27 totaled 142,492,000 barrels as compared with 141,925,000 barrels on July 20, an increase of 567,000 barrels. The increase in stocks was due entirely to California.

American Petroleum Institute report of refinery operations in the United States for the week ended July 27, compared with the week ended July 20

	Per Cent of Capacity Reporting	Crude Run to Stills Wk. Ended 7-27 (Barrels)	Crude Run to Stills Wk. Ended 7-20 (Barrels)	Per Cent of Reporting Capacity Operated Wk. Ended 7-27	Per Cent of Reporting Capacity Operated Wk. Ended 7-20	Stocks Reported in Thousands of Barrels: Gasoline Stocks July 27	Gasoline Stocks July 20	Gas & Fuel Oil Stocks July 27	Gas & Fuel Oil Stocks July 20
East Coast	100.0	3,273,000	3,132,800	82.7	72.2	5,009	5,120	10,289	10,540
Appalachian	86.5	600,000	631,400	85.0	91.3	1,028	1,062	1,131	1,094
Ind.-Ill.-Ky	94.7	2,024,800	2,078,800	92.8	93.9	6,053	6,230	3,864	3,418
Okla.-Kan.-Mo	73.4	1,725,400	1,775,000	79.2	78.3	3,373	3,625	4,309	4,748
Texas	87.1	3,877,500	3,814,100	93.8	91.5	4,718	4,891	12,437	12,646
La.-Ark	90.2	1,124,000	1,129,100	70.4	72.3	1,805	1,776	5,424	5,556
Rocky Mt	92.3	482,500	495,900	56.1	57.7	1,786	1,794	653	649
California	97.8	5,177,700	5,032,000	90.0	91.0	12,170	11,504	104,781	103,247
Total U. S.	91.4	18,285,500	18,089,100	85.6	85.1	35,942	36,002	142,492	141,925
Texas (Gulf Coast)	99.3	3,015,300	2,969,100	96.6	95.1	3,985	4,013	9,708	9,778
La. (Gulf Coast)	100.0	862,400	847,600	79.5	78.1	1,602	1,585	4,512	4,675

Review of Late Production News

A REDUCTION of 14,000 barrels in Santa Fe Springs helped to put the country's mounting production on a more even keel the week ended July 27 when daily average output for the country totaled 2,896,650 barrels, a gain of but 2700 barrels over the previous week, according to the American Petroleum Institute.

Crude oil imports gained 42,286 barrels, being at the rate of 288,000 barrels daily average the past week. Total new crude supply reached 3,184,650 barrels, compared with new supply of 3,139,664 barrels the previous week.

The largest change in any individual field outside of Santa Fe Springs was in the Oklahoma City pool which gained 3250 barrels daily average. Little River and Logan county each gained 1950 barrels; St. Louis pool 1850 barrels; and Earlsboro 1200 barrels.

Winkler county gained 1800 barrels; Pecos fell off 1600 and Howard county fell off 1000 barrels. Gray county gained 1450 barrels, Salt Flat 1300 barrels, and Salt Creek in Wyoming gained 1350 barrels.

Oklahoma-Kansas

WHILE Oklahoma production slumped 15,000 barrels on daily average basis over the past week, the drilling in of a well in the Oklahoma City pool that produced 8300 barrels in 11½ hours indicated that the loss will quickly be made up, particularly as a half dozen wells in that pool are nearing completion depths. The well was the outstanding event of the week. It extends production a quarter mile west.

Temporarily, at least, there is a glut of crude in Oklahoma and buyers have ceased soliciting connections. Where two months ago there was a real scramble for oil, refiners who seek to reduce the amount of crude purchases find difficulty in getting major purchasers to take connections off their hands. Little decline is expected in the daily output and with the gasoline market feeling the effect of California competition far inland, the storm signals are flying in the crude oil division.

Drilling operations in the Mid-Continent show no sign of falling off and may be expected to continue at a high rate in the flush pools. No restrictive measures are being talked but it is not improbable that they will be within two months.

Wyoming, Montana

ALTHOUGH the initial production of the Bear's Den well in northern Montana was only 36 barrels per day of 38 gravity oil, it is considered most important because it proves another district in Montana to be commercially productive. The Bear's den structure is a large one, and is one of several lying partly in Montana and partly in southern Alberta.

Current production in this country by pools is found on page 97.

The well on Flatwillow structure, central Montana, tested 5 barrels per day and will be deepened to the original objective, expected within the next 200 feet. This is expected to be the next new field in the state.

The Producers & Refiners Corp. has abandoned the two tests on South Frannie structure, after the deeper well had developed a very good showing of oil. The structure is south of the proved production on Frannie Dome, northern Wyoming.

Ohio Oil company's discovery well on Middle Baxter Basin structure, southwestern Wyoming, will be deepened in the expectation of developing a greater supply of gas.

California

DAILY average production for week ending July 27 showed a decrease of approximately 20,000 barrels. Decline in the O'Connell wells of the Santa Fe Springs field accounted for a large part of the reduction in the state total that was estimated to be 860,000 barrels.

Only one well was completed in the Santa Fe Springs area during the past week as compared with 8 or 10 completions per week for the past month. A number of important completions are expected in the coming week in the O'Connell and third Clarke zones, that may offset some of the heavy loss sustained by producing wells.

Drilling has practically ceased in the Santa Barbara Mesa field and the majority of operators have signified their intention of pulling out of the area entirely. General Petroleum Corp. which leased 200 acres, containing the discovery well, from Olympic Oil & Refining Co. is reported to have abandoned its interests in the field.

Several production tests will be made within the coming week in the Summerland district, where Lincoln Drilling Co. and Southern Exploration Co. each has a number of wells that will soon be at critical depths in this field of comparatively shallow depths.

Although Standard Oil Co.'s No. 81 at Kettleman Hills has cleaned up so that it is now producing approximately 800 barrels of 59.4 gravity oil and 25 million cubic feet of gas, it is reported that the well will be killed and deepened.

Texas, New Mexico, Louisiana

THE first "gusher" well completed in Cooke county, Texas, was the Kewanee Oil & Gas Co.'s B-6 Timmis, west side of the shallow Bulcher area, which flowed 4370 barrels the first 24 hours at total depth of 1466 feet. Earlier production in the territory has come from wells ranging from 15 to 200 barrels daily, with occasional completions good at first for 600 to 700 barrels. These, however, always declined quickly.

Two interests, the Kewanee Oil & Gas Co., and the Humble Oil & Refining Co., control surrounding locations inside the area previously delimited by dry holes and small wells.

In the Lea county, New Mexico division of the Permian salt basin region the Humble's No. 1 Lindley, 23-26S-36E, is the latest important well. It made 872 barrels, initial production, 67 feet higher on the brown line formation than the adjacent Cranfill & Reynolds No. 1 Wilson. The Humble well is flowing through 3-inch tubing set at 3314 feet.

Eleven locations have been made for wells in the Darst Creek field, Guadalupe county, central south Texas, discovered 10 days ago by The Texas Co., southwest of Luling. Louisiana operations were quiet.

40 Gravity Oil from Gusher Wells In North Texas Area

By Paul Wagner
N. P. N. STAFF WRITER

HOUSTON, July 27 TWO outstanding wells in the Greater Wichita Falls district turned attention to North Texas this week from other recently flush areas of the southwest.

Both Cooke and Jack counties, which have been areas of only nominal production in the past, were affected by the developments noted.

In Jack county, the No. 1 H. C. Shanafelt partnership test of The Texas Co. and the Petroleum Producers Co., came in for 60 barrels an hour at 4570 feet, making it the deepest producing well in North Texas.

The Shanafelt, which will cause redrilling of wells testing unsuccessful at the 3100-foot level in Jack and Young counties, is in the Isaac Nughson survey, abstract 256, one mile west of the town of Bryson.

Reports from the field indicate it is producing 40 gravity oil from a sand horizon instead of the lime pay of the general Ranger territory, 20 to 30 miles southwest.

The general territory adjacent to the Shanafelt well is served by all the major purchasing companies operating pipelines in north and central Texas, all of which would be in position to handle production resulting from future development at the new horizon.

Cooke county's first "gusher" well, in the west part of the Bulcher area, made 4370 barrels actual production the first 24 hours after completion by the Kewanee Oil & Gas Co., July 23. It produced 3965 barrels, actual gauge, the second day.

Lack of facilities for exploiting the well at its maximum prevented an open flow test. It was estimated good at its best for 5000 to 6000 barrels daily of 40 degrees A.P.I. gravity oil, similar in gasoline recovery characteristics to crude produced elsewhere in the Greater Wichita Falls district.

The Kewanee well, B-6 Timmis, in E.T. R.R. survey, abstract 563, came in at total depth of 1466 feet. It is surrounded in all directions by deeper dry holes or relatively small well production at similar depths. The rich character of the individual well has, therefore, raised a question as to whether it results from a highly porous localized condition or some such structural weakness as a crevice, or faulting.

Humble Oil & Refining Co.'s B-3 Poteet well, which offsets the Kewanee B-6 on the west, was four feet deeper than the "gusher" at the end of the week and was good only for about 300 barrels daily on swabbing test.

Occasional wells in the Cooke county area have made from 500 to 700 barrels, initial daily production, but usually best completions have been good for 150 to 200 barrels. Many Bulcher field wells have been as small as 15 to 50 barrels.

Dry holes drilled to deeper levels than the present "gusher" pay appear to delimit production in all directions from the new Kewanee well, except that a considerable "inside" acreage held by the Kewanee and Humble companies has not been disproved.

Kewanee acreage was acquired several years ago from John Hooser and associates of Dallas, who wildcatted the Bulcher area and built up the original shallow production in Cooke county.

Pipeline outlets for crude are provided by the Humble, Shell and Sinclair companies, all of which have connections from the field to their main systems. Sinclair and Shell connected to the Kewanee well immediately after it came in and Humble was reported laying another gathering line to it.

Because of the controlled character of Bulcher field acreage the Kewanee discovery was not followed by trading activity there. The completion of such a well could not, however, fail to stimulate interest in Cooke county generally.

Increasing interest in wildcatting for lenticular sand pays may be expected over the ensuing months of the year and thereafter, depending on the success resulting from stimulated operations.

A subsurface "high" on the Ellenburger lime runs northwest from the vicinity of Sanger, northern Denton county, past the Muenster producing area and is theoretically continued to the Bulcher territory. This known geological condition will stimulate testing that had been allowed to weaken; the Bulcher area is a favorite spot in the general trend.

Extensive leasing took place along the trend mentioned nearly five years ago, hence companies controlling such acreage have only a few months in which to start operations if they are to retain them.

Drilling costs to the shallow pays of the territory are comparatively low, hence there will be no financial stress involved in wildcatting by either small or large operators.

Elsewhere in Texas the week's development was mainly interesting in the new Darst Creek area of Guadalupe county, southwest of Luling, where The Texas, Gulf and Humble companies had made 11 locations following the Dallas Wilson discovery, ten days ago, of the first mentioned.

The Darst Creek area is expected within 90 days to be producing the maximum of approximately 50,000 barrels daily attained by the Luling and Salt Flat fields in the same fault zone region. An 80-acre tract operated in the heart of the new area by the Gulf Production Co. will prove a "key" to the competitive development expected to result from operations of the three companies mentioned.

Shallow gas found in the No. 2 test of W. A. Moncrief and associates, in sec. 13, University block 18, Pecos county, has turned attention of West Texas operators to an area previously marked by the Taylor-Link Oil Co.'s

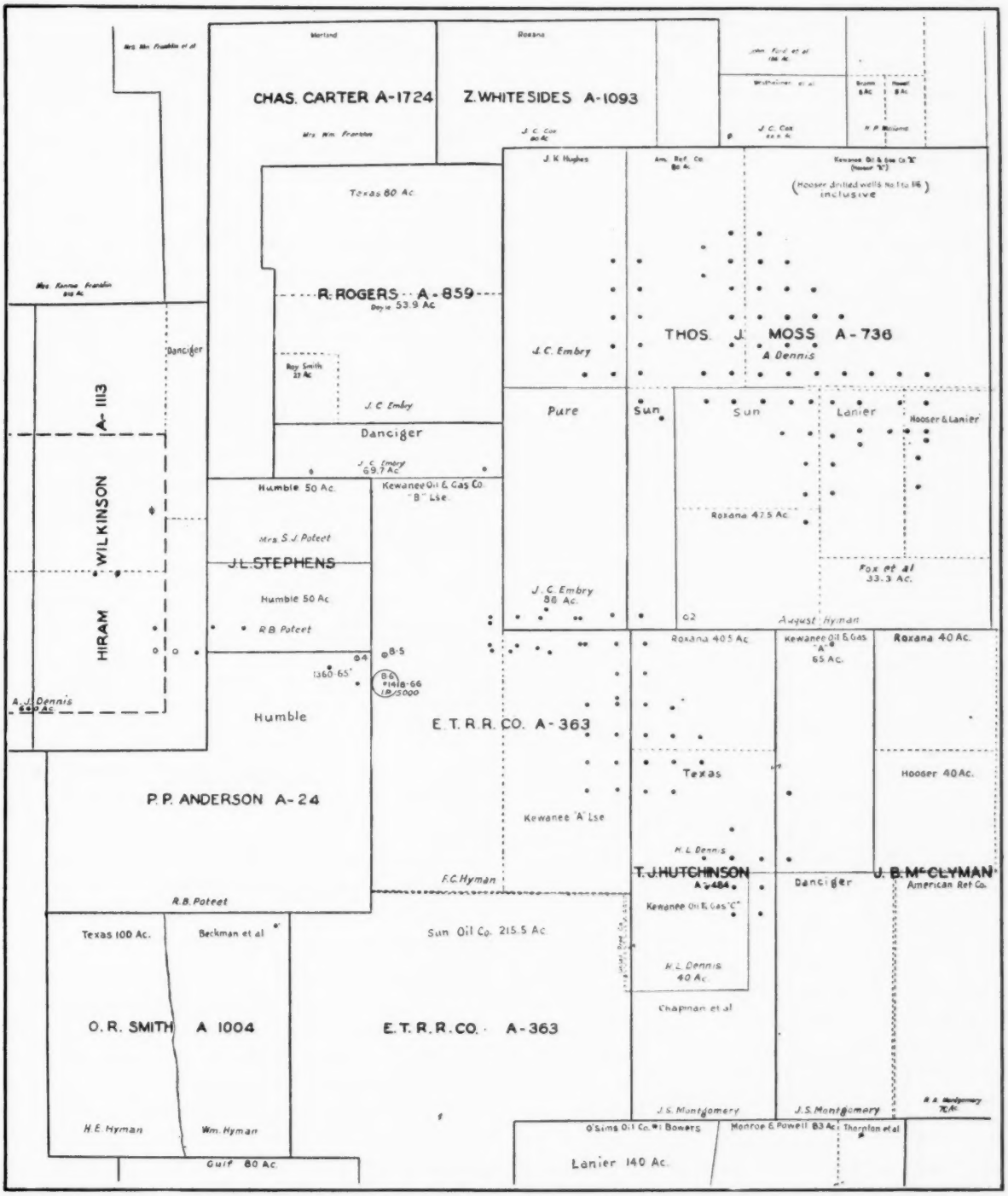
May Agree to Slow Down Work in Darst Field

(By Telegraph)

HOUSTON, July 29.—Efforts to bring about conservative development in the new Darst Creek field of the Luling fault zone were reported making headway July 29. It was said authoritatively that The Texas Co., which discovered the field 10 days ago, would suspend active locations made in the area and that for the present it will drill no additional wells except possibly a north offset to the Dallas Wilson discovery.

Gulf Production Co. and Humble Oil & Refining Co. were said to contemplate no immediate developments on locations announced last week. Action of the several companies in deciding not to rush development had a heartening effect on the Southwestern producing situation because the Darst Creek field is regarded potentially capable of 50,000 barrels daily. Had it been intensively and quickly drilled it was believed the high mark of the field would have been reached in about 90 days.

Map of Bulcher Area, Cooke County, Texas



Ring indicates Kewanee Oil & Gas Co.'s B-6 "gusher" well, variously estimated good for 5000 to 6000 barrels daily at total depth of 1466 feet. Older completions in the area varied from 50 to 200 barrels, generally, with occasional wells good initially for 600 to 700 barrels daily

recent discovery about 20 miles west of the Yates field.

The Moncrief test, which made 15,000,000 cubic feet at 915 feet, is a half mile west of the recent Taylor-Link well, which was good initially for about 120 barrels. Taylor-Link's No. 2 University, a south offset to the discovery, showed a little oil through a bridge in the hole at 925-930 feet. It is also good for about 3,000,000 cubic feet of gas daily.

The most important current completion in the Lea county, New Mexico, division of the Permian salt basin region is the Humble Oil & Refining Co.'s No. 1 Lindley, in sec. 23-26S-36E. The well made initial production of 872 barrels, flowing through 3-inch tubing set at 3314 feet.

Humble's well found the brown line formation 67 feet higher than the nearby Cranfill & Reynolds No. 1 Wilson well, which made smaller initial production. The well is about four miles northwest of the recently completed No. 1 Sheppard well of The Texas Co., and about a mile and a half north of the Skelly Oil Co.'s Joyner old completion.

Why Gasoline Prices Fall in Mid-Season

By Warren C. Platt, Editor

THE greatest problem before the oil industry is to keep its output of finished products in balance with actual consumption.

The industry has advanced materially in this direction in the past few years but it is still a long way from seeing perfection.

At the present time the ragged and declining gasoline prices at refineries at the consuming peak, is evidence of a lack of a correct appreciation by refiners all over the country of this problem. In the face of many conservative forecasts that the gasoline consumption this year would be between 10 and 11 per cent over last year, six refining districts out of a total of ten, way overproduced this percentage and now, they wonder why the prices are declining and loudly condemn "the other fellow" for price cutting.

The real reason is that these refining districts that exceeded 10 per cent increase in gasoline output went after business to which they were not entitled—UNLESS they are willing to go into a knock-down and drag-out fight and prove that they are the better refiners and are "entitled" to the business because they can take it away from them.

We do not mean to imply that there should be any lessening of intelligent competition, nor that all refiners are necessarily entitled to stay in business, nor to a uniform increase of 10 per cent in business this year, BUT with some of the most important refining districts in the country going out and taking the bread and butter out of the mouths of other refiners who for years have held an important place in the industry, these foraging refiners should not get sore if the other refiners object to giving up the business and put up a fight, which finally results in decline of prices at the height of the consuming season.

Business always has and probably always will be a survival of the fittest, but there is no reason why the "fit" should not use some judgment and make sound profits without undermining an industry, while the process of elimination is at work.

The refining districts that have obtained the greatest percentage of the business this year have the largest increase in new crude supply to draw from, West Texas and California. The surplus of crude in those districts, has made a low enough crude price so that gasoline can be produced more cheaply than in the more settled districts. Surplusses of crude always have worked this way and the industry today is tackling the problem of holding back a surplus more vigorously than ever before. But even with a surplus the fact still remains that it is foolish to overmanufacture an article so as to break the market. If the raw material is not needed it should not be manufactured.

California in the first five months of this year increased its gasoline output over the same period of last year by 37 per cent while the gasoline consumption in that state increased only about 14 per cent. California, however, has been able to ship only an increase of nearly 26 per cent, a large part of it way outside its natural marketing territory. California gasoline almost in twice the quantity of the year before, has moved by tanker through the Panama canal to the Atlantic coast and has been shipped back west by tank car as far as eastern Ohio and some reports have it even into Indiana and Illinois.

In addition to this the Indiana-Illinois refiners, those around Chicago, increased their gasoline output this year 24.2 per cent and of this shipped an increase of 22 per cent. Arkansas-Louisiana, (Inland), increased their output nearly 28 per cent and shipped an increase of 25.3 per cent. In addition there was an increase of 34 per cent in West and North Texas with shipments increasing 32 per cent.

These three refining districts have been the dominant factors in the changes in gasoline prices, particularly in tank cars, because with these increases in output and shipments, running well over the 10 per cent that the country will consume, the consuming territory upon which the Mid-Continent refining industry has been dependent has been steadily restricted.

The Oklahoma-Kansas refiners for some years have carefully studied their market requirements and endeavored to keep their output down to those requirements. These refiners have given up a bit of their old territory every year as new refining districts more strongly situated invaded it.

This year, so far, the Oklahoma-Kansas refiners have held their output of gasoline to an increase of 6.7 per cent the smallest of any group in the country, but the invasion of their territory by other refining districts was such that the Oklahoma-Kansas refiners in the first five months shipped an increase of only 1.5 per cent and accumulated a stock increase of 56 per cent the second largest stock increase in the country.

The other refining districts, which were the aggressors in this policy of over-producing the market, did not get all the cream of good prices that they aimed at, because they not only forced down the tank car price but they too accumulated big stock increases. Arkansas-Louisiana inland increased their gasoline stocks 237 per cent, Texas, (inland) increased 35.5 per cent, Indiana-Illinois (the Chicago group) increased 41.5 per cent but California which had the greatest increase in gasoline output of any refinery district, by reason of it invading all possible markets because of its low priced crude and low tanker rates, was able to reduce its stocks of gasoline 8 per cent, the ONLY refining district in the country to have a reduction.

The big East Coast refineries increased output 8 per cent and shipments 8.1 per cent but still suffered a considerable increase in gasoline stocks (due to last year's output being larger than last year's shipments, figures on which the percentages are based). The Texas Gulf district went ahead to 15.4 per cent increase in output and got nearly 14 per cent increase in shipments.

All this suggests a chaos of unintelligence. Here is a product—gasoline—whose demand can be estimated to a fraction of a per cent for a year or two years or more in advance but yet the oil industry pays no attention to that estimate and each company goes ahead as it sees fit regardless of the effect on the whole industry and regardless of the ill effect that comes back on each company.

The oil industry, of course cannot enter into any agreement to hold output to actual requirements, nor should it do so, nor is it necessary that it make any such an agreement. There can be, however, a more thorough study and discussion of these requirements, the amount of gasoline needed to meet them, the amount of crude needed to make that gasoline and the districts from which this crude and this gasoline may come. These discussions can be and should be public and the best forum is the meeting of the American Petroleum Institute, and then of the other interested associations.

That an industry cannot and does not adjust itself to such a comparatively simple and evident a problem, is nothing short of criminal.

May Gasoline Demand 12.7% Over 1929

NEW YORK, July 25.—An increase of 85,907,000 gallons in gasoline consumption in 36 states was reported in May, 1929 over May, 1928, or 12.7 per cent, as indicated in reports made by wholesalers and dealers under gasoline tax or inspection laws according to the American Petroleum Institute.

Total consumption in these states last May was 764,010,000 gallons, compared with 678,103,000 gallons a year ago.

Daily average consumption last May was 24,645,000 gallons, compared with daily average of 22,788,000 gallons in April, an increase of 8.2 per cent in May.

Consumption for the five months ended May, 1929 totaled 3,073,947,000 gallons, a gain of 328,147,000 gallons, or 12.7 per cent, over the corresponding period of 1928.

The following table shows gasoline demand in the 36 states for May, compared with other months:

	Month of			% Change	5 Months ending with		Per cent
	April, 1929 Gallons	May, 1929 Gallons	May, 1928 Gallons	over May, 1928	May, 1929 Gallons	May, 1928 Gallons	change over 1928
Alabama	15,329,000	16,150,000	13,842,000	+16.67	69,840,000	63,256,000	+10.41
Arizona	5,262,000	5,061,000	4,080,000	+24.04	24,892,000	19,342,000	+28.69
Arkansas	10,545,000	11,322,000	9,932,000	+13.99	48,023,000	43,377,000	+10.71
Delaware	2,631,000	2,898,000	2,658,000	+9.03	11,352,000	9,261,000	+22.58
District of Columbia	6,036,000	6,493,000	5,644,000	+15.04	27,562,000	24,282,000	+13.51
Florida	19,835,000	18,554,000	19,197,000	—3.35	101,895,000	102,441,000	—0.53
Georgia	18,130,000	18,884,000	17,133,000	+10.22	83,616,000	79,000,000	+5.84
Idaho	3,872,000	4,982,000	4,765,000	+4.55	15,841,000	15,597,000	+1.56
Indiana	37,148,000	39,280,000	35,690,000	+10.06	161,650,000	140,947,000	+14.69
Iowa	26,718,000	31,644,000	29,023,000	+9.03	115,108,000	114,265,000	+0.74
Kansas	26,921,000	31,118,000	25,601,000	+21.55	123,785,000	109,830,000	+12.70
Kentucky	12,513,000	13,965,000	11,947,000	+16.89	54,059,000	46,856,000	+15.37
Louisiana	15,753,000	14,552,000	13,990,000	+4.02	66,435,000	65,287,000	+1.76
Maine	4,870,000	8,851,000	7,530,000	+17.54	23,704,000	19,840,000	+19.48
Michigan	48,991,000	70,094,000	59,851,000	+17.11	274,814,000	220,037,000	+24.89
Minnesota	29,886,000	34,960,000	32,435,000	+7.78	120,568,000	111,342,000	+8.29
Nebraska	18,427,000	18,841,000	16,542,000	+13.90	83,694,000	76,186,000	+9.85
Nevada	1,193,000	1,315,000	1,236,000	+6.39	5,586,000	4,863,000	+14.87
New Hampshire	3,576,000	5,188,000	4,199,000	+23.55	15,848,000	12,877,000	+23.07
New Jersey	37,657,000	43,759,000	39,087,000	+11.95	173,776,000	152,722,000	+13.79
New Mexico	3,712,000	3,766,000	3,091,000	+21.84	16,027,000	13,304,000	+20.47
North Carolina	17,957,000	22,663,000	19,587,000	+15.70	102,667,000	93,912,000	+9.32
North Dakota	15,538,000	15,850,000	12,040,000	+31.64	46,115,000	38,220,000	+20.66
Ohio	85,619,000	86,035,000	80,998,000	+6.22	349,130,000	309,309,000	+12.87
Oklahoma	25,638,000	25,894,000	22,016,000	+17.61	115,571,000	102,379,000	+10.26
Oregon	11,502,000	13,867,000	13,010,000	+6.59	54,607,000	49,535,000	+10.24
Rhode Island	6,393,000	7,603,000	5,753,000	+32.16	28,357,000	23,146,000	+22.51
South Carolina	9,983,000	10,005,000	8,653,000	+15.62	45,210,000	42,149,000	+7.26
South Dakota	10,889,000	12,787,000	10,768,000	+18.75	44,902,000	39,492,000	+13.70
Tennessee	15,406,000	17,002,000	14,724,000	+15.47	69,208,000	61,758,000	+12.06
Texas	63,243,000	62,709,000	54,985,000	+14.05	286,706,000	252,313,000	+13.63
Utah	4,381,000	5,552,000	4,665,000	+19.01	19,388,000	17,432,000	+11.22
Virginia	17,242,000	18,322,000	16,094,000	+13.84	73,710,000	65,561,000	+12.43
Washington	19,402,000	22,588,000	20,688,000	+9.18	89,849,000	81,544,000	+10.18
Wisconsin	29,654,000	38,163,000	33,426,000	+14.17	119,882,000	113,576,000	+5.55
Wyoming	1,780,000	3,293,000	3,223,000	+2.17	10,570,000	10,562,000	+0.08
Total	683,632,000	764,010,000	678,103,000	+12.67	3,073,947,000	2,745,800,000	+11.95
Daily average	22,788,000	24,645,000	21,874,000	+12.67	20,357,000	18,064,000	+12.69
Increase over previous year:							
Amount of increase..	.....	85,907,000	.....	.....	328,147,000	.....	.....
Percentage increase in daily average....	.....	12.7%	.....	.....	12.7%	.....	.....
Massachusetts	38,361,000	46,947,000	.....	.....	.....	.....	.....

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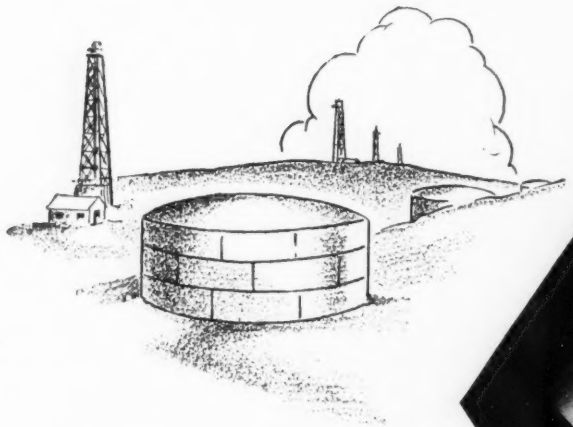

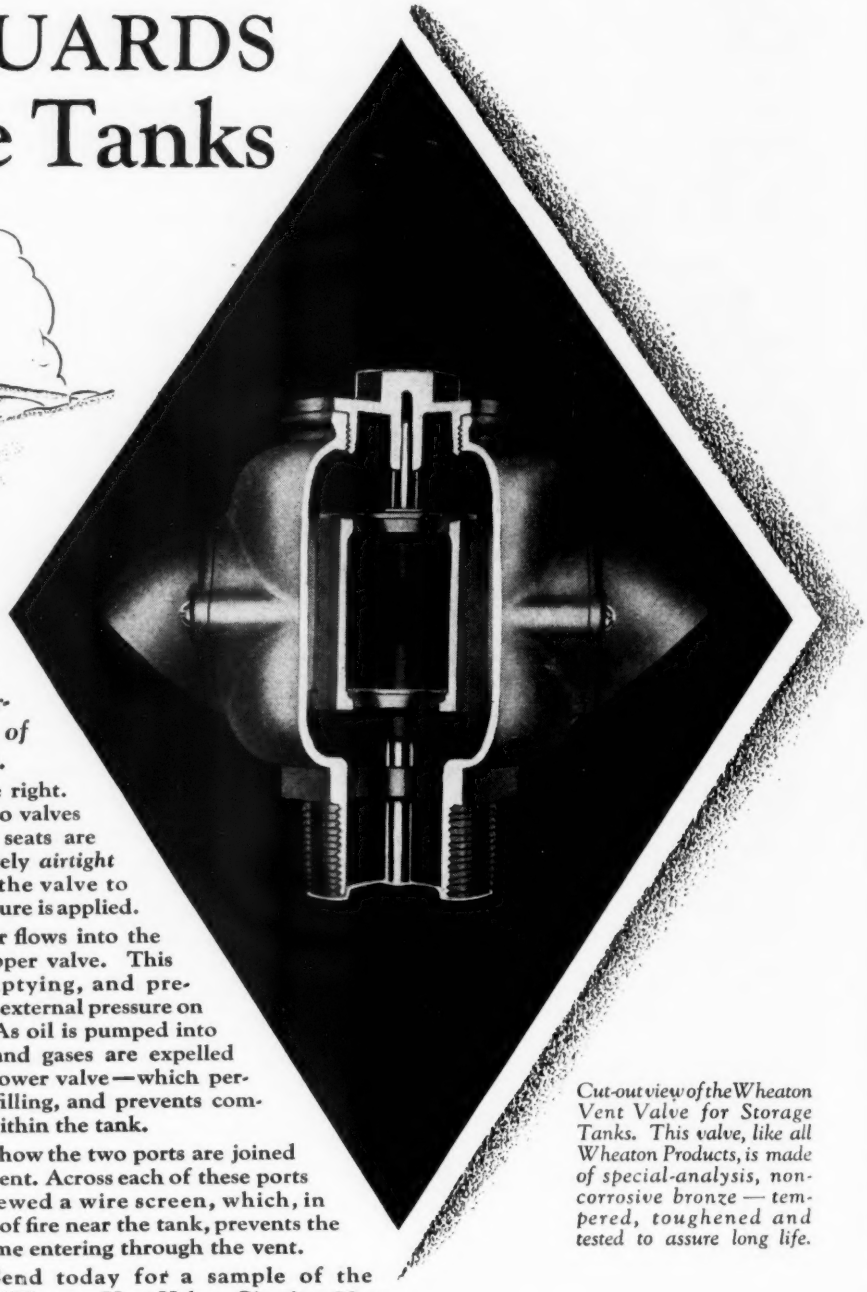

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FAUCETS · VALVES · JOINTS · COUPLINGS · FILLERS · NOZZLES · FITTINGS

Tariff advocates who appeared in Washington before the sub-committee of the Senate finance committee last week are angry. After working for months to get their story before Congress, they found an audience with three men whom they accuse of being prejudiced and unwilling listeners. Senator Walter Edge, brother-in-law of Walter C. Teagle, Senator David Reed, friend of the Mellons of Pittsburgh and Senator William King, an avowed free trader, made up the sub-committee.

Proponents of the tariff attach significance to the relationship of Senator Edge and Mr. Teagle, and the reputed oneness of interest of Senator Reed and the Mellons. Both the Standard of New Jersey and the Gulf Oil Corp. are heavily interested in foreign oil fields and the tariff campaigners say both those companies would naturally be opposed to their cause.

Senator Thomas, of Oklahoma, came out right after the investigation with an assertion that he will sponsor an investigation by Congress into costs of producing oil in foreign fields, notably South America; into the methods by which prices of crude oil and its products are set and finally he would investigate to see whether the big companies have a price-fixing agreement.

It will be a bad thing for the industry if those honest intentioned oil men who are directing the tariff campaign permit political leaders to start a muckraking investigation. The fight on this question should be confined to the economic considerations. It will advance no element of the industry and will result in injury to all to start cooking up scandals and accusing companies of violating the law.

* * *

The engineering department of one of our best oil companies has done a bit of research work, the results of which are passed to all interested and troubled with the same problems. It seems that if you take a little butter and lightly grease the inside of a tumbler, goblet or stein, the occasional "wild" bottle of home brew will not dissipate itself in the air when it is poured out.

It was explained that the factor of surface tension is involved. The butter—olive oil, or even medium lubricating oil may be used—decreases that tension and the brewer's labors are not in vain. The engineer and the chemist who worked out this scheme modestly disclaim credit for anything except good memories. They recalled the custom of thrifty housewives in the old days when the family bucket was always greased a little before sending little Herman over to the "family entrance."

* * *

J. P. D. Hull, business manager of the American Association of Petroleum Geologists, says that the second volume of "Structure of Typical American Oil Fields" is practically ready for the printer, although with the necessary proofreading, etc., it probably will not be ready for distribution until December.

It is to be similar to the first volume, although considerably larger. Volume 1, published in 1929, was quite favorably received and more than 1,100 copies were sold. The forthcoming volume, like the first, will be a valuable reference source. Geologists all over the country have given liberally of their time in preparing articles on fields with which they were most familiar.

* * *

E. B. Reeser, president of the Barnsdall Corp. and of the American Petroleum Institute, has spent practically all the time since the Colorado Springs meeting, early in June, in New York. He is presumed to be taking a vacation but the Tulsa executives say he must be laying off in the evenings only, as a wire or a letter from here to him always gets a prompt reply.

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Died: F. A. Innes, Tulsa, widely known map maker, in Hot Springs, Ark. He engaged in the mapping business during the Nowata field boom years ago. In recent years he confined his work to the Osage reservation.

* * *

Disposal of the Humble Oil & Refining Co.'s Oklahoma production and acreage to the Carter Oil Co. is part of the realignment that has been going on within the Standard of New Jersey ranks for more than a year. The Carter acquires several thousand acres of undeveloped leases and about 3300 barrels production, nearly all settled. It is located in southern Oklahoma, the production being in Carter and Stephens counties. The move is like the one several months ago when the Standard of Louisiana acquired Humble's properties in that territory.

* * *

John Reeves, geologist for the Empire Oil & Refining Co., Kansas territory, has been transferred to Lansing, Mich. He trades posts of duty with Robert L. Kidd, who will come to Eldorado, Kan.

* * *

A. W. Peake, president of the Dixie Oil Co., spent several days in Tulsa the past week. He merely looks enigmatic when questioned as to the rumored removal of Dixie's headquarters from Shreveport to Tulsa. With the big acreage purchase Dixie made recently when it bought a half interest in the undeveloped holdings of the Amerada Petroleum Corp. in Kansas and Oklahoma, it is certain to be more active in the Mid-Continent than it ever has been.

Mr. Peake would be a welcome addition to the Tulsa oil fraternity and a substantial loss to Shreveport. We try to be impartial as between the two cities, but if pinned down, we would admit that we hope the rumor is founded on fact.

* * *

Ellick Botts, popular pumper of the Gray Horse district, has resigned because of ill health, to enter business for himself and to devote full time to his large private interests.

* * *

W. S. Fitzpatrick, chairman of the board of the Prairie Oil & Gas Co. with Clark Kountz, vice-president of the Prairie Pipe Line, and their wives are devoting about a month to an auto tour of the Northwest.

* * *

Kendall Winship, vice-president of the Gypsy Oil Co., is one of the most nonchalant of men and this quality at times stands him in excellent stead. For example: when he first played the golf course of the Tulsa Country Club, after an absence of several years spent in Venezuela, he arrived at the third tee and was confronted

by two fairways, running very near each other at one point.

Mr. Winship, on occasion, is an accomplished slicer and this was one of the occasions. His ball described a beautiful flat trajectory and missed the dignified whiskers of an elderly gentleman in the next fairway by the proverbial gnat's eyelash. But Mr. Winship was equal to the delicate problem presented.

Looking neither to the right nor the left, he strode down his own fairway with his eye fixed on a spot where a purely imaginary ball rested. The old gentleman who so nearly escaped a shave was hopping mad, but he was also quite perplexed.

* * *

Oklahoma is considered, by some who have never been this far west, as still being the land where cowpunching is a common calling. It was front page news last week when a round-up of 2000 head was held near Ramona.

* * *

The Noble-Olson Drilling Co., of Tulsa, has found air travel a big advantage in keeping its many strings of tools running. Last week the company bought a second airplane. The first was purchased 60 days ago.

* * *

Pre-vacation thoughts. . . . Mustn't forget to get that new tire and have the others shifted. . . . If the California gas law works out, it will take off some of this pressure in the Mid-Continent. . . . Memo, look up number of wells probable of completion at Oklahoma City within two weeks. . . . Mustn't forget to get a new shaft in the niblick. . . . Have valves ground and oil changed. . . . Mid-Continent association should or should not have a meeting on the tariff soon. . . . Whatever became of Mark L. Requa. . . . Wonder what kind of flies they use on the Wisconsin fish. . . . If they were just bullheads it would be easy. . . . 90 barrels per hour is not so hot in that chat formation. . . . Maybe we ought to start in on the Sunday shut-down again. . . . Hope that course up there has no water hazards. . . .

* * *

Ten Years Ago

(From National Petroleum News, July 30, 1919)

Lee Scott becomes general superintendent of production of White Eagle Oil & Refining Co.

Standard of New Jersey announced listing of $100,000,000 preferred stock on New York stock exchange.

Hope Natural Gas Co. abandons deepest test ever drilled for oil or gas at 7579 feet, near Fairmont, W. Va.

Attorney General Palmer starts investigation into dispute between Texas and Oklahoma over Red River boundary line.

Sir Boverton Redwood, English authority on petroleum, dies.

A veteran of the Seminole development is F. W. (Rowdy) Robson, who is in charge in the field of the Carter Oil Co.'s gas lift work. He has been in the field since its discovery three years ago

Association to Consider Stand on Tariff

TULSA, July 27.—Following repeated urgings of members who favor a tariff on petroleum that the Mid-Continent Oil & Gas Association give endorsement to that issue, President J. C. Denton, of the association's Kansas-Oklahoma division issued a call this week for a meeting of the executive committee. It will meet in Tulsa on Tuesday, Aug. 6, at 2 p.m.

In the official notice, Mr. Denton said:

"The meeting is called at the request of a large number of individual operators who feel that the association should consider both the economic problem and the question of the association's activity with regard to the same."

At the same meeting consideration will be given to the Kansas tax situation. A commission appointed several months ago by Governor Reed is reported to favor the placing of a gross production tax on oil and gas. The association's staff is assembling data on this question to present to the commission some time early in September.

Mr. Denton made public a letter he wrote to Wirt Franklin, Ardmore, Okla. Mr. Franklin is president of the recently organized Independent Petroleum Association of America, whose principal purpose is the procurement of a tariff on oil. Mr. Franklin, who is also a vice-president of the Mid-Continent Oil & Gas Association, Kansas-Oklahoma division, wrote Mr. Denton about a month ago urging the association to become interested in and give endorsement to the tariff campaign.

Mr. Denton's reply pointed out that the association's constitution and by-laws contemplate that the organization shall not undertake any project which might aid one group at the expense of another. He showed that the organization has declined to enter freight rate controversies and similar movements where there was a diversity of interests among the membership.

Since the Colorado Springs conference Mr. Denton said that he has interviewed many members regarding the tariff and whether the association should take part. He has found a diversity of opinion. He gave it as his opinion that the association might be harmed by taking a stand in either direction, possibly losing some of its present support from either the Independent or Standard groups.

Mr. Denton expressed the belief that individuals in the association should carry on their fight outside the association, cooperating with those of like belief. Stating his own position he showed himself to be associated with a strictly Independent company with no objection to the tariff but that personally he thinks the effect a tariff would have has been over-estimated.

Despite his opinion, he announced the forthcoming meeting to consider whether any action should be taken.

W. T. Funk in Motor Accident

(By Telegraph)

TULSA, July 29.—Wilbur T. Funk, vice president of the Carter Oil Co., who was injured Saturday afternoon in an automobile accident is making satisfactory recovery. His injuries consisted of a broken collar bone and minor cuts and bruises. Early reports which resulted in dozens of calls to the Carter offices here were much exaggerated as to the seriousness of the accident.

CLEVELAND, July 29.—The "New Kathode" welding electrode has just been placed on the market by the Lincoln Electric Co. here. It is made for the arc welding of mild steel and for cast iron repair work. The composition and special treatment given the new kathode are said to impart qualities heretofore lacking in the usual electrode, such as a clean weld with minimum slag and oxidation and increased welding speed, and a soft and readily machineable weld.

Oklahoma City to the Fore with Well Flowing at 17,000 Barrel Rate

By Lawrence E. Smith
N. P. N. STAFF WRITER

TULSA, July 27

THE Mid-Continent fields saved their big news of the week until its close and what a jolt it was! Friday evening one of the Oklahoma City pool wells came in with a flow of such proportions as to make the skeptics on the Mid-Continent price structure—and the army is an increasing one—feel certain that the present price cannot stand.

The well is the Indian Territory Illuminating Oil Co.-Foster Petroleum Co.-Cromwell Oil & Gas Co.-Wirt Franklin Petroleum Corp.'s No. 1 Bertha Johnson, NE NE NW of 25-11-3W, a quarter of a mile west of nearest production. Getting the pay at 6330 feet and penetrating it to 6355, the well made 8,355 barrels of oil against 500 pounds back pressure in the 11½ hours from 6:30 o'clock Friday evening to 6 o'clock Saturday morning.

It was then shut in because the tankage was full and the Empire Pipe Line Co.'s gravity line couldn't handle the oil. Re-opened for 30 minutes at 10 o'clock the well flowed 298 barrels. A telegraph bulletin which will be found elsewhere in this issue will give the performance of the well over Sunday.

It is by far the biggest strike in the field to date and it indicates the big possibilities of the field. The production is coming from a sand found just above the Siliceous lime, which latter is the main pay of the field thus far. The Siliceous lime, as shown by well records, has been eroded on the crest of the structure and the depression therein replaced with a variety of material. The general term "detrital zone" has been applied to this replacement material. In some of the wells it is a conglomerate.

One other well, Coline Oil Corp.'s No. 1 Olds, C SE NW of 24-11-3W found its pay in sand similar to that of the new big well. Its pay is 6300-11 feet. The Coline well is five-eighths of a mile due north of the big one and no well intervening has reached the same sand. Some of the wells in this general detrital zone find big gas and extremely light oil, practically gasoline.

With total production of the field slightly exceeding 32,000 barrels for the 24 hours ended at 7 a.m. Saturday morning, it is easy to see a 50,000-barrel mark within a short time. Anything may happen from 6300 feet on to 6600 and several wells are reaching critical depths. Those soon to be heard from are:

Mid-Kansas Oil & Gas Co. & Ramsey Petroleum Corp. NE NE NW of 19-12-1W, some 10 miles northeast of the field, drilling at 6170 feet.

Magnolia Petroleum Co.'s No. 1 Noble, NW SW SW of 30-12-2W, six miles northeast of the field, cored lime at 6320-37 feet and had gas which blew the mud out of the hole.

Indian Territory Illuminating Oil Co. and Foster Petroleum Co.'s No. 2 Button, SW NW SW of 19-11-2W, fishing at 6206 feet. It is a quarter of a mile northeast of the discovery and is considered within the proven area.

I.T.I.O. and Foster's No. 1 Fuzzell, SW NW of 19-11-2W, drilling at 6404 feet. Cromwell Oil & Gas and Wirt Franklin have an interest in the lease.

Slick and Prairie Oil & Gas Co.'s No. 1 Hiddleston, SW SW SE of 19-11-2W, drilling at 6426. This well would extend production a half mile east.

Shell Petroleum Corp.'s No. 1 Petty, C NW NW SE of 30-11-2W, fishing at 6212 feet. This is an offset south of the Slick-Prairie Hiddleston.

Shell Petroleum Corp.'s No. 2 Petty, SW SW NE of 30-11-2W, show of oil and running 6⅝-inch casing at 6473 feet. This is an offset north of the Sinclair-Amerada No. 1 Kinter "gasoline" well. The Kinter well found top of pay at 6170 feet.

Cromwell & Franklin's No. 1 Trosper, C SE NW of 13-11-3W, drilling at 6075 feet. This is three-quarters of a mile northwest of nearest producing well.

Indian Territory Illuminating Oil Co. & Foster Petroleum's No. 2 A. Bodine, SW NE SE of 24-11-3W, total depth 6536 feet, running 4¾-inch casing. Like the Mid-Kansas Oil & Gas Co.'s No. 1 Fortson, three-eighths of a mile northwest, this well is running lower than the average of Siliceous lime completions in the field.

I.T.I.O. and Foster's No. 1 Henning, C NE SW SE of 24-11-3, bailing at 6480 feet. With producing wells in all directions except the west, it is considered certain to produce. It was ready to drill out the plug on Saturday and should be a completion by the time this is printed.

The field as now constituted is about three miles from northwest to southeast and three-quarters of a mile wide at its extreme width. It is defined in no direction, unless the presence of a large quantity of water in the Sinclair Oil & Gas Co.'s No. 1 Stamper, NE SW NW of 30-11-2W can be considered as indicating a southeast edge. No wells farther southeast than this have gone into the Siliceous lime.

Comparative production of the Oklahoma City pool wells over one week's time is as follows:

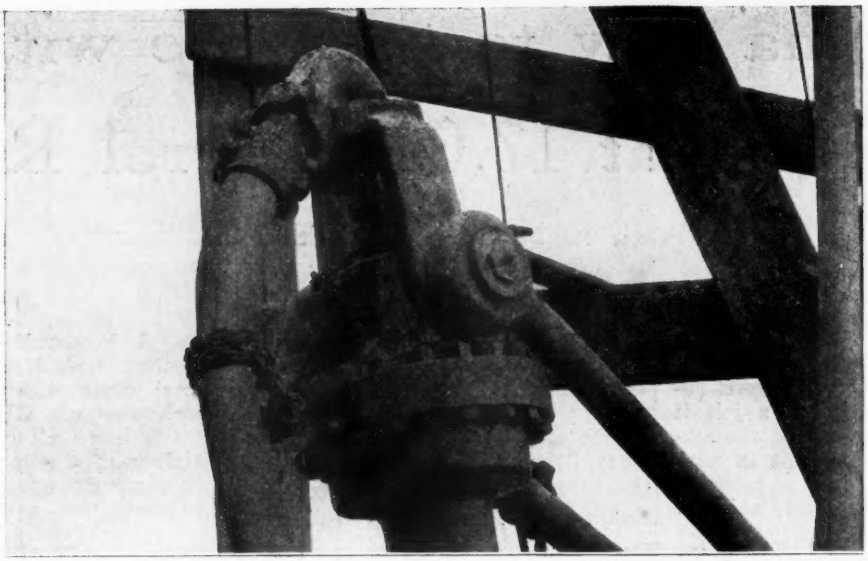
Company	Well	Location	Prod. July 27	Prod. July 20	Remarks
Coline	No. 1 Olds	24-11-3W	4,508	4,716	.....
I. T. I. O. et al	No. 1 Button	19-11-2W	1,452	630	Drilling 6517 ft.
I. T. I. O. et al	No. 1 Fee*	24-11-3W	1,926	1,925	705 bbls. water.
I. T. I. O. et al	No. 1 Watters	25-11-3W	2,324	325	Gasoline—back pres. 1850 lbs.
I. T. I. O. et al	No. 1 Johnson	25-11-3W	8,355	.....	11½ hours.
Mid-Kansas	No. 1 Fortson	24-11-3W	3,883	3,166	.....
Mid-Kansas	No. 2 Fortson	24-11-3W	3,746	5,782	Drilling deeper.
Sinclair	No. 1 Stamper	30-11-2W	4,480	5,140	1,800 bbls. water, drlg. deeper
Sinclair	No. 1 Kinter	30-11-2W	1,400	1,640	Gasoline—1,050 lbs. back pres.
	9 wells		32,074	23,324	

*Discovery.

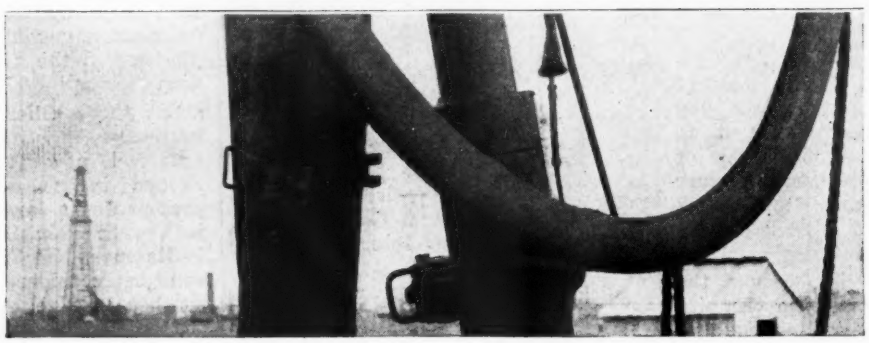
As of the two dates the water in the Sinclair Stamper well gained 500 barrels while the oil declined 660 barrels.

Turning from the Oklahoma City topic, which is becoming an unpleasant one, the state's production as a whole declined nearly 16,000 barrels, according to the estimates of a major company. The total for all pools of Oklahoma on a daily average basis for the week was 701,560 barrels. Kansas showed an increase of 4,220 barrels, averaging 123,870 over the week.

The older pools of the Seminole dis-



IT HOLDS THE PRESSURE!



Goodyear Rotary Hose has proved in actual service that it possesses the qualities which make for trouble-free operation at lowest ultimate cost.

It holds the pressures unfailingly, no matter how high they may be or how sudden the increase. Hour after hour, day in and day out, it withstands the terrific force with which the mud column is driven down the drill stem.

It is both strong and flexible. Reinforced at the ends with two extra plies that insure substantial support for the couplings, Goodyear Rotary Hose, because of its special construction, has the strength and also the flexibility to endure the twisting strain without flinching or giving way.

It resists the abrasive action of the gritty and sometimes oily mud which is forced through it. The tube is specially compounded for this very purpose.

Staunchly protected against damage, it withstands the punishment of daily use. Carcass is reinforced with wire for added strength and resistance to burst. Outer covering is high grade extra-tough rubber made especially to resist abrasion.

Does your hose meet these tests—the tests of a good rotary hose? If not, you want Goodyear Rotary Hose, the hose that is built to meet the service required and to protect our good name.

TRANSMISSION BELTS—*Cord Oil Well, Thor Oil Well, Goodyear, Wingfoot* • HOSE—*Air, Water, Steam, Gasoline, Fire, Mill* • OIL SUCTION *or* DISCHARGE HOSE • ROTARY HOSE • PACKING—*Asbestos and Rubber Sheet for both field and refinery service* • PUMP VALVES • SLUSH PUMP SLEEVES • SWAB RUBBERS.

The Greatest Name in Rubber

GOODYEAR

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Looking north from the Oklahoma City field toward the business section

trict decline but slowly and the relatively small areas that persistently come in on the fringes of older development have served to increase the total for the state over the summer. With Oklahoma City showing as it now is, chances are the state will make up its last week's deficit and then some.

Oklahoma's second best well of the week extended the Roxana, or Lovell pool of northwestern Logan county one-fourth mile west. J. S. Cosden Oil Co.'s No. 1 Gardner, NE NW of 31-19-4W, after producing from a higher level for nearly a month, was deepened to the Wilcox sand which was topped at 5952 feet. At three feet in this formation the first 24 hour's production was 5,265 barrels and its production for July 26th, three days later, was 5,040 barrels.

The nearest production is Shell Petroleum Corp.'s No. 8 McCully, a quarter mile east, which made 7,000 barrels initially. While structure is responsible for oil accumulation in this pool, the amount of the production is governed by porosity and the Cosden well hit a rich spot.

A feature of Kansas development of the week was the poor showing made by Wentz Oil Corp.'s test northwest of the Valley Center pool of Sedgwick county. The well, in the SE NE NW of 1-26-1W, a half mile west of the so-called Golden Triangle part of the pool opened by Gypsy-Marland-Bu-Vi-Bar companies a year ago, had been high structurally on upper formation and had resulted in a heavy royalty "play" in that direction.

The well found the upper dolomite formation, productive in a few wells in the region, at 3337 feet, drilled in to 3360 feet and swabbed 250 barrels daily. It was then carried deeper, going through 13 feet of Simpson shale and at 3373 feet hit the lower dolomite from which the bulk of the production of the field comes. At two feet in this formation the well got water and is being plugged back to the upper pay.

The well ran higher on the lower dolomite by 20 to 35 feet than the wells in the triangle part of the pool and was structurally higher throughout than the discovery of the field.

In southwestern Rice county, Kans., a new chat formation pool appears to have been opened by the test of Hilligoss and Steinbuschel on the Schurr farm. (We hope no names have been misspelled.) The location is the NE SW of 21-20S-10W. Top of the pay was 3282 feet, cable measurement, and the well at last reports was slopping over with oil. There is not enough gas to cause it to flow. Nearest production of consequence is 25 miles east, also in Rice county, where a chat pay pool has been producing for four years.

* * *

Notes on the Week

The Texas Co.'s No. 1 Blood, NW SW SW of 21-28S-1E, Sedgwick county, Kans., in the Robbins pool south of Wichita, had top pay at 3087 feet and drilled in nine feet where it swabbed and flowed 580 barrels in its first 24 hours. It is an offset to the discovery well of the pool, which is making around 280 barrels. In the East Seminole pool, between the original Seminole City and Earlsboro pools, Magnolia Petroleum Co. put its No. 2 D. W. Anderson on air lift and stepped its production up to 4,800 barrels in 24 hours.

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There is a little "kick" left in the Asher pool of Pottawatomie county. Simms Oil Co. deepened its No. 3 Laster, SW NE NE of 19-6-4, three feet to total depth of 3631 feet and a 24-hour production was 4,485 barrels. The pool as a whole is making 11,175 barrels from 16 wells.

* * *

Prairie Pipe Line Co. is contemplating the laying of an eight-inch line, 38 miles long, from its Kansas station northeast of Wichita to small production southeast of McPherson county. Survey has been made and pipe ordered. If laid, the line can be considered as the first step toward the Prairie's getting into western Kansas.

* * *

Derby Oil Co. brought in a good well on the Greenwich townsite, Sedgwick county, Kansas. Its No. 1 Hladik, lot 3, block 10, otherwise the SW SE SW of 15-26-2E, topped pay at 2918 and at two feet in the well made 2,000 barrels. This is chat pay.

In the same area the well of Deal et al., NE SW SW of Sec. 15, reported last week at 40 barrels per hour, pumped 600 barrels late this week, making five per cent water and the offset of it, drilled by Kenny et al. which flowed and swabbed 1,400 barrels initial is pumping 800 barrels with two per cent water.

* * *

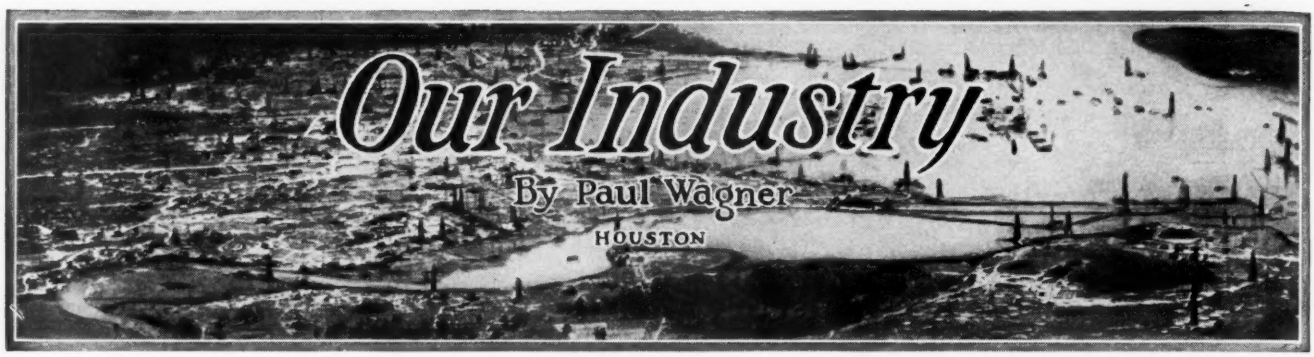
In Reno county, Kans., the Skelly Oil Co.'s No. 1 Birket, NE SW of 30-24-7W, found top of a sand at 2075 feet and at 10 feet in was estimated at five million feet of gas. This is in the area where Hartman & Skaer drilled an oil well more than two years ago and nothing more has been done with the pool.

Skelly bought out Hartman & Skaer and produced the well, which is now making 25 barrels daily. The gas well is a mile and a half southeast of the discovery and the sand which yields the gas carried water in the original well.

* * *

A failure in the Sasawka pool, southeastern Seminole county, makes that pool one to be regarded with caution by the operator. Indian Territory Illuminating Oil Co.'s No. 1 Porter, NE corner of 24-6-7, had top of the Wilcox at 4306 feet and four feet in the hole filled up 3000 feet with water.

It is roughly a half mile southeast of the Signal Oil Co.'s No. 1 Bond, SW NE of 13-6-7, the outpost well of the field to the southwest. The pool at the end of the week was making 8,500 barrels daily from seven wells, a decline of 765 barrels from the previous week with no new wells added.



His second major contribution to the structural development of Fort Worth is about to be made by R. O. Dulaney of the Fort Ring Oil & Gas Co. He and his associates will build a 15-story office structure, costing upwards of $1,000,000, at Fifth and Main streets. Mr. Dulaney is already owner and builder of the Petroleum building, completed several years ago at Fort Worth.

The new building is to be worked out among the modernistic lines, it is announced from Fort Worth. Immediately after Mr. Dulaney made his plans known he departed for Chicago to join Harry Friedman, Fort Worth contractor, on a trip to Detroit, where such a structure has been built. They were also to visit three other cities where similar architectural plans are being employed in building construction.

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S. L. Cronin of the Pure Oil Co.'s land department in the southwest has been spending some weeks in California. His presence on the Pacific Coast has given rise to suggestions that the Pure will enter the ranks of eastern companies now operating there. The Pure recorded its incorporation papers in California several months ago, thereby qualifying to engage in business in the state.

R. O. Dulaney

The transfer of W. K. Mellon to Los Angeles headquarters of the Petroleum Rectifying Co. of California has been followed by the appointment of L. E. McDonald to be Texas-Louisiana-Arkansas division manager. Mr. McDonald makes headquarters in Houston.

* * *

H. E. Soarez has been appointed purchasing agent of the Tropical Oil Co., at El Centro, Colombia, South America, succeeding L. Ritchie, transferred to Toronto headquarters of the parent Imperial Oil, Ltd., of Canada.

* * *

A staff of technologists, consisting of geologists and geophysicists, is now making a subsurface survey of the Alamo property of the Penn-Mex Fuel Co., below the Tuxpam river in the general Tampico district of Mexico. Included in the party are O. C. Lester, Jr., R. B. Haynes, D. J. Daigle, Stanley Wilcox and H. L. Durrett.

* * *

George A. Weaver of the Pure Oil Co.'s geological department has been transferred to work in East Texas since his return to this country from Venezuela.

* * *

Venezuelan development has drawn heavily on the personnel formerly engaged in Tampico district of Mexico operations. Among those now engaged in tropical work are Don Shonquist, Vincent Yocom and E. G. Orange, all drillers for the North Venezuela Oil Co., at Puerta Cabello. William Link is with the Lago Petroleum Corp. in the Maracaibo district.

* * *

Z. Birdwell, formerly in charge of the Pure Oil Co.'s field operations at Hackberry Island, Cameron parish, Louisiana, is looking after a test now being drilled on the north flank of the Moss Bluff salt dome, Liberty county, Texas. The Moss Bluff dome was found by geophysical methods about three years ago and subsequently proved structurally by shallow wells unsuccessfully drilled to test sulfur prospects. George W. Davis succeeded Mr. Birdwell at Hackberry Island.

* * *

Richard G. Reese, formerly of the Associated Oil Co. organization, at Los Angeles, is a new addition to the Geological staff of the Standard Oil Co. of California.

George H. Burruss, formerly superintendent of the Col-Tex Refining Co., at Colorado City, has been appointed general manager. L. C. McCloud has been made superintendent of the straight run refinery and E. H. Gunn superintendent of the cracking installation. The Col-Tex plant is owned 50 per cent by the Standard Oil Co. of California, San Francisco, and 50 per cent by the Anderson-Pritchard Corp., Oklahoma City.

* * *

Clarence E. Olmsted, vice president and general manager of The Texas Co. of California, succeeded to his present position in the reorganization that followed The Texas Corp.'s acquisition of the old California Petroleum Corp. He is a product of The Texas Co.'s training, and left that organization in 1924 to head the California Petroleum Corp.'s transportation and natural gas departments. Later, he became a vice president, the position he held when the fortunes of merging brought him back under The Texas Corp.'s wing. Mr. Olmsted entered the petroleum industry in 1919 in the New York engineering department, successively holding refinery and terminal department positions. He is a vice president of the California Oil & Gas As-

C. E. Olmsted

sociation and a member of its "wildcat" entertainment committee.

* * *

Petroleum Accountants Society of Los Angeles has been formed for mutual benefits and closer cooperation generally. M. G. Kerr of the Union Oil Co. of California is president. A. J. Olmsted of the Chanslor Canfield-Midway Oil Co., is first vice president; R. E. Ecke, Wilshire Oil Co., second vice president; Fred Vaile, West Coast Refining Co., secretary-treasurer. The directorate also includes Wesley Cunningham, General Petroleum Corp.; B. B. McBride, Continental Oil Co.; R. J. Pagen, Pacific Western Oil Co.; J. H. Rounsavell, Signal Oil & Gas Co.; and J. S. Wallace, Richfield Oil Co.

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Sidney Paige, geologist and engineer, is now associated with Ed B. Hopkins with offices at 25 Broadway, New York City. He recently returned to this country from Venezuela.

* * *

E. Ordonez, dean of Mexican geologists, has returned to Mexico City from Nicaraugua. He was in former years identified with the Tampico district subsidiaries of Pan American Petroleum & Transport Co., when Edward L. Doheny controlled that company.

* * *

N. S. Wilson, formerly of Casper, Wyoming, has been transferred to California by the Midwest Refining Co., subsidiary of Standard Oil Co. of Indiana. The Midwest is becoming active in San Luis Obispo county, where Mr. Wilson will have charge of its affairs.

* * *

John Franklin Dodge, fuel oil engineer of the Standard Oil Co. of California, has been named professor of Petroleum engineering of the University of Southern California at Los Angeles. Mr. Dodge reached the Standard's organization when that company absorbed the Pacific Oil Co., in 1927. Since the war he had been previously identified with Pacific Oil and other interests then identified with the Southern Pacific railroad.

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H. W. McCue, until a year and a half ago employed by the Marland Companies in Texas and New Mexico, is now at Amarillo as field engineer for the Piney Oil & Gas Co. The Piney is a subsidiary of the Columbian Carbon Co.

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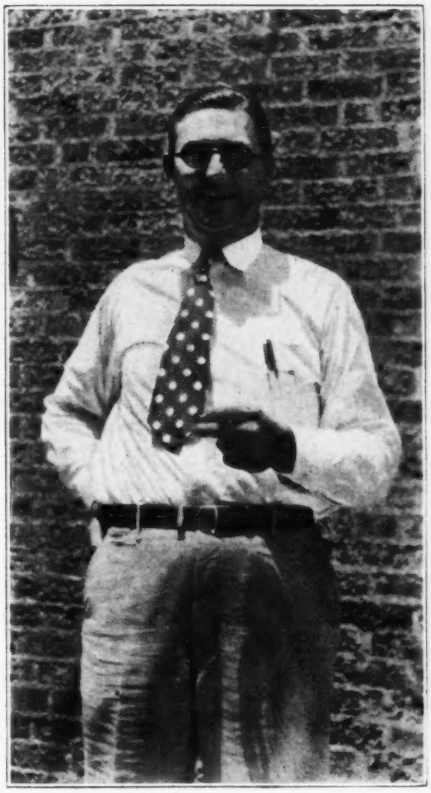
Carl G. Cromwell has established an office at San Angelo for rotary and cable tool contracting. He was formerly connected with the Texon-Group 1 companies in the Big Lake field of Reagan county, Texas, as general superintendent of development and production. His interest in the Texon-Group 1 companies passed to Continental (Marland) Oil Co., in the recent deal whereby control was sold by Haymon Krupp, Frank T. Pickrell and others.



Paul B. Hunter

Paul B. Hunter, formerly Abilene district geologist of the Marland Production Co., who resigned last spring to join the Shell Petroleum Corp., in eastern territory, is stationed at Muskegon, Mich., studying sub-surface conditions.

* * *

Neil J. Norris, general superintendent for George F. Getty, Inc., Los Angeles, has resigned to take a production post in the MacMillan Petroleum Co. Rufus Fadler district superintendent, joined Mr. Morris in the MacMillan organization.

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Henry Dawes, 23, formerly in the auditing department of the Pure Oil Co., at Chicago, recently resigned to become secretary to his uncle, General Charles G. Dawes, United States ambassador to England. Young Dawes, who is the namesake of his uncle, the president of Pure Oil Co., was graduated from Williams College in 1928.

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Ellsworth McGowan, vice president of the Kettleman Oil Corp., Los Angeles, has officially announced removal of the company offices from the Subway Terminal Bldg., to 508 Edwards-Wildey Bldg., Sixth St. and Grand Ave.

* * *

The transfer of Superintendent Bower from the Mexia district of the Pure Oil Co., to the southwestern producing division at Tulsa, brought W. H. Seyffert to the position Mr. Bower vacated. Mr. Seyffert was formerly Powell district superintendent.

E. P. Angus, vice-president and general sales manager of the Magnolia Petroleum Co., will serve as chairman of the thirteenth annual roll call of the American Red Cross in Dallas county, Sept. 15 to Oct. 5. Mr. Angus was chairman of the membership campaign last fall.

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John B. Demaria has succeeded William Lacy as president of the Italo Petroleum Corp., Los Angeles. Mr. Demaria was formerly vice president. Mr. Lacy will continue on the board of directors.

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D. O. Bayless, land department superintendent of The Texas Co. in the Fort Worth division, spent his vacation in Rocky Mountain territory.

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C. A. Heiland, professor of geophysics at the Colorado School of Mines, expects to return to his home in Golden about the middle of September after a European trip. He is combining business with pleasure on his old world tour.

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Frank C. Adams is now South Texas division geologist of The Texas Co., with headquarters at Houston.

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H. S. Tullis has been transferred from Houston to McAllen, Texas, by Humble Oil & Refining Co., to look over exploratory work in the lower Rio Grande Valley region. He will maintain district offices at McAllen.

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R. D. Matthews, refinery vice president of the Union Oil Co. of California, Los Angeles, is now on a business and pleasure trip to Europe. He will visit France, England and Wales.

* * *

M. G. Gulley, who has been spending the last year and a half in various parts of the territory where Eastern Gulf Oil Co. operates, has been transferred to Pittsburgh headquarters. He is working with K. C. Heald, staff geologist. Mr. Gulley was connected with the executive department of the Marland Oil Co. of Delaware before joining the Gulf organization.

* * *

L. R. McNamara, superintendent of traffic and shipping for The Texas Co. of California, has been identified with the petroleum industry nearly 20 years. He was with the Standard Oil Co. of California from 1911 to 1926, when he resigned to head the order and distribution department of California Petroleum Corp. He was appointed to his present position in 1928, after Calpet had been absorbed by The Texas Co. Mr. McNamara is a native of Franklin, Pa., where his common school education was gained. Later, he took business courses at Duquesne University and extension work from the Universities of Illinois and California.

Kettleman Hills Agreement Waits Signature of Operators

LOS ANGELES, July 27

ALTHOUGH Kettleman Hills operators have verbally agreed to halt drilling in that area for two years, only six or seven of the fifteen necessary signatures have been obtained.

Among the operators reported to have actually signed the agreement are the following: Marland Oil Co., George F. Getty, Inc., Carl Beal, E. J. Miley, Superior Oil Co., and Dickson Maddux. A copy of the agreement has been sent to the New York office of the Milham Exploration Co., and to the San Francisco office of the Standard Oil Co. These two companies, together with the remaining interested parties, who have been given copies of the agreement, are expected to sign-up within the coming week.

A new amendment has been incorporated into the agreement at the reported insistence of George F. Getty interests. This change provides for the uncapping of completed wells. In its amended form the section reads as follows:

"It is further understood and provided under this agreement that if before July 1, 1931, a market need for new production in California develops, evidenced by the fact that:—there has been a decrease in the storage of light crude oil above 20 degrees gravity—oil is being produced in substantial quantities from fields or wells now shut in—posted market price for light gravity crude oil has been increased or there exists any other substantial evidence—or any drilling of adjacent lands not covered by this agreement threatens drainage of the lands now included in the above named permits, a majority may petition the Secretary of the Interior to terminate this period of suspended development and of non-production; provided, however, that in the event of a termination of this agreement, as above provided, the rights of the signatories mentioned in paragraph 8 shall be preserved.

"Provided, however, that if after April 1, 1930, any or all of the four wells above mentioned continue to produce and an active market demand for Kettleman Hills production develops, any substantial interest among the operating companies, signatory hereto, may petition the Secretary of the Interior with a sufficient showing of fact, and he shall thereupon modify the term of the suspended development and of non-production at least to the extent of meeting the predicated demand.

"And provided further that the Secretary of the Interior upon due notice may terminate the period of suspended development and of non-production or modify its terms, at any time when convinced it is in the public interest."

The importance of the change in this section of the agreement is that it allows a minority of the operators interested in the area to petition the Secretary of the Interior to terminate the period of suspended development.

Paragraph 8 referred to in the above amendment provides that the wells of Pacific Western Oil Co., Nos. 81 and 54; Petroleum Securities Co. Nos. A1 and B2; Marland Oil Co. Nos. 2-4 and 2-16, and of Superior Oil Co. No. Helm 1 may be commenced the number of days prior to the end of the suspension period, equal to the number of days elapsing between the date of filing their respective applications to drill and the effective date of this agreement. Drilling of the necessary offsets thereto may be concurrently commenced.

Applications for permits to drill the above wells were denied by the government several weeks ago.

Dr. George Otis Smith is confident that all the necessary signatures will have been secured within the coming week, although he states that there is just as much red tape in the corporations as there is claimed to be in the affairs of the government. It is this red tape that prevents a number of the larger interests signing the agreement.

11 Wells Drilling Into Third Clarke at S. F. Springs

LOS ANGELES, July 26

CALIFORNIA daily average production showed a heavy decrease for week ending July 25, as wells producing from the O'Connell sand at Santa Fe Springs dropped off from their high initial production figures.

Zone	Production July 25	Production July 18	No. of Wells July 25	No. of Wells July 18	Average per well July 25	Average per well July 18
Nordstrom	21,590	21,914	26	25	830	876
Buckbee	24,100	24,690	46	48	524	514
O'Connell	200,465	220,590	71	70	2823	3151
Upper Clarke	1,455	1,760	1	1	1455	1760
Lower Clarke	9,680	7,510	9	8	1075	939

Unless flush production of from 35,000 to 45,000 barrels is added to the field's total production from some of the 26 wells drilling in, 14 wells cemented over, or 17 wells preparing to complete in the O'Connell zone, it is not expected that last week's peak of 285,000 barrels will be exceeded.

The third Clarke zone is holding the interest of Santa Fe Springs operators at the present time, as 11 wells are drilling in, 4 are cemented over, and 4 are preparing to complete in it. Standard Oil Co.'s Jordan No. 8 is producing 2276 barrels from 10 feet of open hole in this zone, with the bottom of the hole at 7990 feet.

Standard Oil Co.'s Walker No. 16 is reported to have cored over 250 feet of rich oil sand and shale in the third Clarke zone, and is expected to further demonstrate the possibilities of this deep sand within the coming week.

General Petroleum Corp. is estimated to have a deep zone production of 48,660 barrels from 48 wells, or an average of 1014 barrels per well; while Union Oil Co. is a close second with 46,000 barrels from 18 wells, for an average of 2555 barrels per well. The Texas Co. has dropped to third place for production from the deep sands, with an estimated output of 39,400 barrels from 18 wells, an average of 2190 barrels per well.

Production by zones for weeks ending July 18 and 25 are as follows:

Graham-Loftus interest's well Dodge No. 2 was the only sizable completion in the Long Beach field during the past week. It came in for 2150 barrels from a depth of 7543 feet. Shell Oil Co.'s deep test of this field is down below the 9145 mark, although nothing of a predictive nature has been penetrated. It continues in alternate streaks of hard and soft shale, with occasional thin showings of oil.

San Joaquin Valley tests continue to hold interest for California operators. Drilling operations are on the increase, and recent completions have caused the leasing of considerable additional acreage.

Hancock Oil Co. has commenced operations on its holdings in Maricopa Flats, adjacent to the land controlled by the Doyle Petroleum Co. Its No. 1 well in section 8-11-23 is below 600 feet and derricks have been erected for wells Nos. 2 and 3.

Doyle Petroleum Co. has added 40 acres to its original 26 acres in the Maricopa Flats area and has made locations for its wells Weir Nos. 2

and 3. The company's Weir No. 1, which was completed recently, is now producing 1208 barrels of 23.5 gravity oil from a depth of 3581 feet.

A test was made yesterday, July 25, in the North American Consolidated Oil Co.'s Bronco No. 1 in the Maricopa area, but at latest reports it had failed to show much kick on the swab. This company's initial deep test of this area, the Sunset Extension No. 1, resulted in 1000 barrels of 19 gravity oil.

Failure on the part of General Petroleum engineers to return the Lomas discovery well in the Santa Barbara Mesa area to production, after it had been shut down for lack of storage, and the inability of other wells to obtain commercial production, has caused the company to abandon its interests in that field.

When an attempt was made to open up the Lomas well again, it failed to make more than a few barrels of salt water.

Drilling is progressing in the Olympic Oil & Refining Co.'s Knott No. 1, east of the Lomas well, on a few acres that the company retained when it turned over 200 acres to the General Petroleum at the height of the drilling campaign in the Mesa field.

Craft Petroleum Corp's well Foster No. 1 and Union Oil Co.'s Mesa No. 1 are the only producers in the Santa Barbara Mesa field, each making about 200 barrels of oil and considerable salt water.

Lincoln Drilling Co. will attempt to place its Williams No. 1 in the Summerland field back on production within the next few days. This well sanded up after it was completed at 1250 feet, and was deepened to 1346 feet, continuing in fairly saturated oil sand. Another test that is being watched in this area is Southern Exploration Co.'s Twitchell No. 1, which is below 1100 feet in formation that corresponds with that found in the Williams well.

Standard Oil Co. completed its No. 81 in the Kettleman Hills area for an initial production of 620 barrels of 60 gravity oil, 20 million cubic feet of gas, from a depth of 6673 feet. This well is the fourth producer in the Kettleman Hills area and, under the agreement that is awaiting the signature of operators in that district, it will be allowed to produce in an effort to reduce the pressure in the Milham discovery well.

The first real oil sand was picked up in this well at 6604 feet, a few feet deeper than the depth at which Shell Oil Co.'s Armstrong well is now producing. Shell's well came in for an initial production of about 200 barrels of oil and 12 million cubic feet of gas from 6553 feet. The good flow of gas with a comparatively small yield of oil in these two wells causes operators to believe that the upper Temblor is furnishing the gas and that the Milham Exploration Co.'s Elliott No. 1 is getting its oil below the 7000-foot level.

Standard is obtaining approximately 26,000 gallons of natural gasoline from its No. 81 and at latest reports the oil flow has increased to 800 barrels per day. It is reported that the well will be killed and deepened in an effort to secure a greater flow of oil.

First Aid In Ranger Field

CHICAGO, July 29.—First aid instructions have been given by Joseph S. Ferraro, first aid instructor of the U. S. Bureau of Mines, safety division, in Ranger, Tex. for the past several weeks to oil company employes.

Mr. Ferraro has visited these points: Freeport, Tex., July 1 to 6; Thurber, July 8 to 20; and Olden, Tex., July 22 to Aug. 3.

Completions in Oklahoma and Kansas, Week Ended July 27, 1929

OKLAHOMA

Cotton County

Company	Well No.	Location	Depth	Init. Prod.
Leath et al	1	SEc SW 24-2-9 W	T.D. 2503	Dry

Creek County

Company	Well No.	Location	Depth	Init. Prod.
Buckles et al	1	SEc NE NE 1-14-10 E	T.D. 3140	Dry
Franchot-Mid-Cont.	4	NEc SW 16-16-10 E	T.D. 2930	Dry
Love-Meyers et al.	1	NWc NE 15-16-9 E	T.D. 2993	Dry
Glen-Evans et al.	1	SWc 30-19-9 E	T.D. 2595	Dry
Central Com.	2	NWc SW 10-17-10 E	1999-2009	1M
Silurian	3	NEc 17-18-7 E	2390-2547	20
Magnolia	1	NW SW SE 9-18-7 E	2640-2720	2
Phillips	1	NEc 20-19-9 E	2260-2294	25

Hughes County

Company	Well No.	Location	Depth	Init. Prod.
Amerada	1	NWc SW 4-8-9 E	T.D. 3539	Dry
Texas Pacific	5	NW SE SE 19-5-8 E	T.D. 2906	Dry
Texas Pacific	4	NE SW SE 19-5-8 E	T.D. 2781	Dry

Jefferson County

Company	Well No.	Location	Depth	Init. Prod.
Beck-Lapham	4	NE SE SW 34-6-5 W	1129-1147	30

Logan County

Company	Well No.	Location	Depth	Init. Prod.
Marland	2	NW SW NE 16-18-4 W	4108-4122	10

Muskogee County

Company	Well No.	Location	Depth	Init. Prod.
Johnston et al	2	NWc SE SE 13-13-18 E	708-721	1.3M
Powell	1	CSL SW NW 13-14-18 E	T.D. 1128	Dry
Decius-Garrett	1	NEc NW 18-14-18 E	T.D. 1764	Dry

Okfuskee County

Company	Well No.	Location	Depth	Init. Prod.
Umburn et al	2	SWc 1-10-11 E	T.D. 1658	Dry
Umburn-Fleming	1	NW NE SW 12-10-11 E	1562-1585	50

Okmulgee County

Company	Well No.	Location	Depth	Init. Prod.
Pine	1	CSL SW NW 18-15-13 E	2196-2199	2.5M
Kirkland-Son	2	CWL NW SW 19-15-13 E	1429-1498	20
Wallace	8	C SW NE 14-14-14 E	1748-1768	35
McClain-Miller	1	NE NW SW 24-14-14 E	T.D. 2359	Dry

Osage County

Company	Well No.	Location	Depth	Init. Prod.
I. T. I. O.	407	NEc SW SE 18-25-12 E	T.D. 2040	Dry
Osage	1	SWc 29-28-11 E	1824-1841	1¼M
Peters	5	SW SE SE 22-27-11 E	1648-1662	50
Peters	4	NW NE SW 32-24-9 E	2152-2212	10
Gray et al	4	SW SE SE 34-24-8 E	2564-2567	90

Pawnee County

Company	Well No.	Location	Depth	Init. Prod.
McMan et al	1	CWL SE SE 27-20-9 E	1888-1895	1M
Flanagan-Johnson	1	CNL NW SE 25-20-9 E	T.D. 2010	4
Jackson et al	7	NE SW NW 25-20-9 E	2015-2052	5
Union	1	NE SW NE 17-20-10 E	T.D. 2300	Dry

Pontotoc County

Company	Well No.	Location	Depth	Init. Prod.
Independent	1	NE NW SW 19-5-5 E	T.D. 2681	Dry

Pottawatomie County

Company	Well No.	Location	Depth	Init. Prod.
Phillips-Furhman	1	SWc SE 33-8-5 E	T.D. 4489	Dry
Phillips	2	SEc NE 2-7-4 E	T.D. 4430	Dry
Pure	2	SWc NW 1-7-4 E	T.D. 4245	Dry
Clark-Cowden	1	NWc SE 18-6-4 E	T.D. 3925	Dry
Indep.-Darby	1	NE SE SE 16-7-4 E	4010-4028	1160
Magnolia	1	NE SE SE 15-7-4 E	4217-4222	227 OWD
Pure	1	NW SW NW 1-7-4 E	4026-4147	130
Independent	1	SW NW NW 1-7-4 E	4236-4320	590
Simms	3	SW NE NE 19-6-4 E	3610-3628	4120
Magnolia	3	NEc NW 22-7-4 E	3625-3755	8.5M

Seminole County

Company	Well No.	Location	Depth	Init. Prod.
Gypsy	1	SEc NE 23-5-7 E	4087-4092	1032
Magnolia-Mid Kans.	1	NE NW NE 5-9-6 E	4289-4363	107
Barnsdall	9	NW SW SW 11-8-5 E	4230-4236	385
Blackwell	1	NW NE SE 11-7-6 E	3121-3140	10
Empire	12	SW NE SE 11-8-5 E	4177-4199	625
Carter	3	SW NW SE 23-7-6 E	3090-3139	100
Gypsy	3	NW SE NE 5-7-7 E	4209-4219	3015
Mid-Continent	6	NE SW NE 5-7-7 E	4240-4268	3995
Carter	1	NE SE SW 7-6-8 E	T.D. 4249	Dry
Gypsy	1	NW NE NE 20-10-7 E	T.D. 3963	Dry
Continental	1	SE NE NE 5-8-8 E	T.D. 4386	Dry
Carter et al	1	NEc NW 35-10-6 E	T.D. 4636	Dry

Stephens County

Company	Well No.	Location	Depth	Init. Prod.
Pace et al	6	SWc NE SE NE 13-2-8 W	T.D. 1497	Dry
Pace et al	3	SEc NW SW 2-2-8 W	T.D. 2408	Dry
Pace et al	1	NWc SE NW SE 21-2-7 W	1730-1737	300
Ven Mex-Mid-Continent	7	C NE NW 34-1-8 W	2247-2253	40
Magnolia	10	SEc SW NE 34-1-8 W	1833-1843	90
Lone Eagle	12	NEc NW SE 34-1-8 W	2210-2213	5M
Huff-Duff	6	SWc NE 34-1-8 W	1845-1849	10M

Wagoner County

Company	Well No.	Location	Depth	Init. Prod.
Ash Bros	1	NEc NW 22-18-17 E	805-843	1¼M
Webb et al	1	SEc NW 6-16-16 E	1530-1537	10

KANSAS

Butler County

Company	Well No.	Location	Depth	Init. Prod.
Phillips	4	SW NW NW 9-27-6 E	2742-2762	60
Empire	3	SE NW NE 34-27-5 E	2690-2722	200
Empire	81	NW SE NE 19-26-5 E	2523-2609	100
Empire	18	NW SE NW 18-26-5 E	2612-2615	200

Cowley County

Company	Well No.	Location	Depth	Init. Prod.
Lewis Prod	1	SE SW NE 30-31-6 E	2905-2941	75

Elk County

Company	Well No.	Location	Depth	Init. Prod.
Frantz et al	1	SW SE SW 12-31-10 E	T.D. 2264	Dry
Barber et al	1	NEc SW 12-30-9 E	T.D. 2710	Dry

Ellis County

Company	Well No.	Location	Depth	Init. Prod.
Johnson et al	1	SWc NW 15-14-16 W	T.D. 3502	Dry

Greenwood County

Company	Well No.	Location	Depth	Init. Prod.
Reed et al	1	SEc 2-24-10 E	T.D. 2306	Dry
Transcontinental	1	SWc NE 36-23-11 E	T.D. 1975	Dry
Shull Drlg	1	NE SE NW 17-24-13 E	1585-1593	50
Sheedy et al	3	C N½ N½ 5-24-13 E	1593-1614	100
Empire	2	SE NE SW 36-23-11 E	1771-1825	225
Texas	5	SE NW SE 21-23-11 E	1871-1964	350
Empire	2	NW SE SE 21-23-11 E	1866-1957	800
Empire	2	NE SE SW 15-22-12 E	1764-1772	50
Transcontinental	4	SW NW NE 10-22-10 E	2249-2266	700

Marion County

Company	Well No.	Location	Depth	Init. Prod.
Prairie-Connell et al.	1	SEc SW 3-18-3 E	T.D. 2897	Dry
Hartman-Skaer et al.	1	NEc NW 28-18-3 E	T.D. 2965	Dry

McPherson County

Company	Well No.	Location	Depth	Init. Prod.
McPherson	1	C SE 11-19-2 W	2887-2914	18M
McPherson	1	NW SE SW 1-20-2 W	2961-2966	1100

Morris County

Company	Well No.	Location	Depth	Init. Prod.
Hiatt et al	1	NWc SE 35-15-5 E	T.D. 2380	Dry

Russell County

Company	Well No.	Location	Depth	Init. Prod.
Texas	1	SWc 31-12-15 W	2983-3007	60

Sedgwick County

Company	Well No.	Location	Depth	Init. Prod.
Davis-Skelly	9	SWc NE 1-26-1 W	3357-3365	710
Producers	1	SW NE SE 31-26-2 E	T.D. 3640	Dry
Kroder et al	1	SWc NW SW 20-26-1 E	T.D. 1140	Dry

Completions in California, Week Ended July 20, 1929

Long Beach

Company	Well No.	Location	Depth	Init. Prod.
Geo. F. Getty Inc.	No. 26	....	7300	610
MacMillan Pet. Corp.	No. 10	....	4435	250

Santa Fe Springs

Geo. F. Getty Inc.	S. F. 24	....	6800	6100
Geo. F. Getty Inc.	S. F. 26	....	7300	375
Shell Oil Co.	G. H. N. 14	....	6864	4200
Standard Oil Co.	Johnson No. 6	....	7906	1350
Standard Oil Co.	Jordan No. 8	....	7990	2255
Union Oil Co.	Bell No. 41	....	6865	7285

Seal Beach

Associated Oil Co.	Bryant No. 3	....	5543	625

Baldwin Hills

Standard Oil Co.	Investment No. 1-60	....	2301	480

Athens Rosecrans

Union Oil Co.	Rosecrans No. 12	....	5863	775

Ventura Avenue

Company	Well No.	Location	Depth	Init. Prod.
Associated Oil Co.	Lloyd No. 59	....	7384	1300

Santa Barbara Mesa

Union Oil Co.	Community No. 1	....	2186	250

Maricopa Flats

Doyle Petroleum Co.	Weir No. 1	....	3491	1500

Fruitvale

Mohawk Oil Co.	Red Ribbon No. 5	....	4158	550

Kern Front

General Pet. Corp.	Young 33	....	1965	200

Round Mountain

Pet. Securities Oil Co.	Coffee No. 1	....	1522	shut in
Shell Oil Co.	Jewitt No. 3-1	....	1987	500

New Field Operations in Oklahoma, Kansas, North, North Central, East Central, Panhandle and West Texas, Week Ended July 27, 1929

OKLAHOMA

Cotton County

Company	Well No. & Farm	Location	
Stewart-Wiley	1-Watkins	NWc NE 14-2-11 W	

Creek County

Sherry et al.	1-Bartlett	SWc NE NE 28-19-9 E	
Dedman et al.	1-Sheppard	SEc SW 17-17-10 E	
Sooner	3-Bruner	C SE SW 12-17-11 E	
Franchot	31-Kiefer	SW NE SW 17-17-12 E	
Texas Pacific	8-Beaver	NWc 17-16-9 E	
Carter	7-Durant	SE SW NE 18-16-9 E	OWD
Carter	9-Durant	NEc 18-16-9 E	
Selby	6-Durant	SW SE NE 18-16-9 E	
Franchot-Mid-Cont.	11-Carr	SEc NE NE 26-16-9 E	
Devonian	1-Bosen	SEc NE NE 35-15-7 E	

Hughes County

Superior-Amerada	2-Jimboy	NW SE SE 4-8-9 E	

Lincoln County

Continental	1-School Land	NW NE NW 36-17-3 E	

McClain County

Sikes et al.	1-Cook	SW NW NE 36-6-3 E	

Muskogee County

Bryan	1-Simmons	SE NE SE 4-15-15 E	
Swindler	1-Howard	NWc SW NW 29-15-16 E	
McCullouch et al.	1-Gansett	SEc SW SW NE 13-15-18 E	
Ray	1-Foreman	SEc NE SW 14-13-18 E	
Johnston et al.	1-Jordan	NWc NE 23-13-18 E	

Okmulgee County

Trout Drlg.	6-Mayfield	CEL SW SW 20-16-14 E	
Kirkland-Son.	3-Prince	NWc NE NW 20-15-13 E	
Gray	4-Derrisaw	CEL SE SE 14-14-12 E	
Wallace	9-Colbert	CWL SW NE 14-14-14 E	

Osage County

Pet. Drlg. et al.	1....	NWc SW 31-25-8 E	
Cottrell et al.	56....	SWc NE NW 22-25-12 E	
Harland	50....	SWc NE NW 18-24-12 E	
Moore et al.	8....	NW NE NW 16-21-9 E	
Silurian	57....	NE NW NW 17-23-12 E	

Pawnee County

Spess et al.	1-Miller	NW NE SE 20-20-10 E	
Sears et al.	4-Wiggs	CSL NE NW 35-20-9 E	
Chamberlin	1-Coats	SEc NE 27-20-9 E	

Pontotoc County

Independent	1-Norris	SW NE NW 19-5-5 E	
Benedum-Trees	1-Jacobs	NE SW SW 28-5-5 E	
American	3-Robertson	NEc SW 19-5-5 E	
Empire	3-Morris	NW SE NW 19-5-5 E	
Empire	2-Morris	SEc NW 19-5-5 E	

Pottawatomie County

Magnolia	1-Mull	NEc SE 15-7-4 E	
Simms	4-Laster	SE NW NE 19-6-4 E	
Prairie-Slick	6-Laster	NE SW NE 19-6-4 E	

Company	Well No. & Farm	Location
Slick-White Eagle	3-Latimer	SWc NW 16-7-4 E
Simms	1-Benham	SWc NE NW NW 19-6-4 E
Wortham	1-Townlot	SE SW SW 18-6-4 E
Wortham	1-Townlot	NEc SE SW SW 18-6-4 E
Commerce Dev.	1-Townlot	SWc 18-6-4 E
I. T. I. O.	1-Philpot	NWc 4-5-5 E

Seminole County

Pure	4-Bates	NW SE NE 13-6-7 E	
Pure	3-Bates	SE NW NE 13-6-7 E	
Skelly et al.	1-Chapman	NW NE SW 8-6-8 E	
Magnolia	12-Anderson	NE SE NE 18-9-6 E	
Gypsy et al.	1-Conner	SW NW SE 20-7-6 E	
Texas	2-Chilcoat	NW SW NW 4-7-7 E	

Stephens County

Pace et al.	8-McMasters	NWc SE NE 13-2-8 W	

Tulsa County

Dickerson	8-Cooper	C SW 12-16-13 E	

KANSAS

Butler County

Millmack	1-Clearwater	SWc 33-25-3 E	
Empire	3-Sherrock	SW NE NE 27-27-5 E	
Empire	8-Hutchinson	NE SW NE 27-27-5 E	

Clay County

Derby	1-Neimiller	C NW SW 19-10-3 E	

Coffee County

Hines et al.	1-Barngrover	SWc NW 7-23-15 E	

Cowley County

Lewis Prod.	1-Pierce	NE NW SE 30-31-6 E	

Elk County

Union et al.	1-Scuhl	C SE NW 1-31-9 E	

Ellis County

Byrens et al.	1-Fischer	NWc SE 4-11-20 W	

Greenwood County

Empire	2-Hoggett	SEc NW 9-25-13 E	
Empire	1-Patterson	NW SW SE 36-23-11 E	
Empire	4-Edwards	SW NE SE 21-23-11 E	
Empire	3-Edwards	SW SE SE 21-23-11 E	
Foster	2-Scott	NE SW SE 7-24-12 E	
Huston Okla.	13-Sullivan	SE NW NW 14-24-12 E	

Harvey County

Liggett et al.	1-Regier	SE NW SE 2-23-3 W	

Lyon County

Gordan-Stats	1-Murphy	NWc NE 32-21-11 E	

(*Continued on Page 47*)

New Field Operations in Oklahoma, Kansas, North, North Central, East Central, Panhandle and West Texas, Week Ended July 27, 1929

(Continued from Page 46)

McPherson County

Company	Well No. & Farm	Location
McPherson-Shell	1-Hull	C SW 11-19-2 W
Shell	2-Ritz	SEc SW 1-20-2 W
Derby	1-Stuckey	NEc SE 9-21-3 W

Russell County

Mid West Explor	4-Baxter	NE NW SW 32-13-15 W

Sedgwick County

Barnsdall	1-Parks	SWc SE 13-25-1 E
Texas	1-Dixon	SEc SW 13-25-1 E
Skelly	1-Gracher	NEc NW 11-26-2 E
Skelly	1-Myers	NWc NE 11-26-2 E
Prairie	1-Hinds	SWc SE 2-26-2 E
Ramsey et al	3-Mason	SEc NW SE SW 15-26-2 E
Rogers et al	1-Johndro	SWc SE SW SW 15-26-2 E
Shell	2-Communtiy	NW SE SW 15-26-2 E
Shell	3-Communtiy	SEc NW SE SW 15-26-2 E
Shell	2-Fischer	SE NE SE 15-26-2 E

TEXAS

NORTH CENTRAL AND EAST CENTRAL

Anderson County

Humble	4-Holloway	.....	Roberts

Brown County

Buder (Trustee)	5-Carr	Blk-624	Kenney
Green	8-Moore	.....	Behm
Lloyd	12G No. 2 Collins	Blk-139	Smith
Lloyd	18-Stanley	Blk-139	Smith
Shaw	1-Joplin	.....	Collins
Texas	3-Johnson	.....	Nix
Anderson	6-Leatherwood	Sec-11 Blk-789	Delgado

Callahan County

Brodstreet-Holden	5-Caranang	Sec-98	Camal Co.
Humphries Bros	8-Gray	Sec-40	D&DA
Breeman	2-Biggerstaff	Sec-310	SP
Cook et al	1-Cook	.....	Smith
Campbell	1-Alexander	Sec-23	ET
Campbell	6-Alexander	Sec-24	ET
Warren-Hayes	12-Biggerstaff	Sec-310	SP
Bailey-Mancill	2-Williams	Sec-139	Univ.
Whitesides Bros	1-Murrell	Sec-29 Blk-2	H&TC

Coleman County

Mid West Explor	3-Keeney	Blk-269	Cochram
Smith	1-Morris	Blk-483	Woods
Smith	2-Morris	Blk-482	Woods
Smith	3-Morris	Blk-483	Woods
Cont. et al	13-Overall	Blk-701	Barkley
Cranfill-Reynolds & Owens	1-Vance	Blk-129	Lane
Wilmott	2-Vaughn	Blk-79	Sanders
Steph-Keister	1-Morris	Blk-505	Gollard
Amac et al	1-Adams	Blk-244	Frazris
Eastland et al	5-Keeney	Blk-269	Cochran
Eastland et al	9-Morris	Sec-24 Blk-722	Webber
White Eagle	2-Morris	Sec-25 Blk-722	Webber
White Eagle	5-Morris	Sec-25 Blk-722	Webber
Owens et al		Blk-483	Wooes
Dozier-Humphrey Bros.	1-Adams	Blk-244	Frazier
Dozier-Humphrey Bros.	2-Searr	Blk-243	Shanks
Ramslinger et al	1-Riddle	Blk-249	Loriny
Grass Roots	1-McDemott	Sec-27	Camal Co.

Eastland County

Forrester-Starr	3-Spencer et al.	Sec-29 Blk-2	H&TC
Tex-Wa & Kirk	1-Murrell	Sec-29 Blk-2	H&TC
Atwood et al	1-Ainsworth et al.	.....	Mathis
Loborough et al	1-Kincaid et al.	Sec-52 Blk-4	H&TC
Vandirer	1-Pippen	Sec-3166	TE&L
Gordon	1-Clark	Sec-13 Blk-2	ET

Jack County

Bradstreet	1-Pruitt	.....	Smith
Panhandle	4-Smith	.....	Hughson
Mid-Texas	1-King	Sec-197	Breno

Shackleford County

Dull-Earle	2-Mathews	Sec-32	ET
Combest	1-Mathews	Sec-30	ET
Big States	9-Russ	Sec-17 Blk-11	T&P
Hughes et al	1-Davis	Sec-44 Blk-13	T&P
Roeser-Pendleton	14A62-Cook	Sec-62	ET
Tannehill et al	6-Mathews	Sec-27	ET
Tannehill	22-Newell	Sec-11 Blk-11	T&P

Stephens County

Texas Pacific	76-Binney	Sec-53 Blk-4	T&P

Taylor County

Mid-Continent	1-Coady	Sec-120 Blk-28	Gaudalupe Co. Sch. Ld.

Throckmorton County

Combest	1-Tuton	Sec-2	SP
Hay-Hodges	1-Mathews	Sec-233	ET

NORTH TEXAS

Archer County

Pace	2-Mankins Est.	.....	SP
Archer Drlg	1-Staley	Sec-20 Blk-15	ATNCL
Rathke	2-Parrish	Sec-2	SP
Gwynn & Archer Drlg.	3-Thompson	Sec-20 Blk-15	ATNCL
Trout et al	1-Lyles	Sec-7	Hooper et al.
Burns	4-Wilson	Sec-114	ATNCL
Texas	1-Chancellor	Blk-32	Harris
Continental	3-FCSL	Blk-16	FCSL
Moran Drlg	2-Bloodworth	.....	Cartwright
Underwood Drlg	4-Andrews	Sec-1805	TE&L

Cooke County

Company	Well No. & Farm	Location	
Richardson Bros	1-Whaley	.....	Thompson
Sinclair	1-Embry	.....	ET
Kewanee	1-Milburn	.....	Elliott

Wilbarger County

Phillips	NN23-Waggoner	Sec-42 Blk-4	H&TC
Phillips	04-Waggoner	Sec-45 Blk-4	H&TC
Procter	1-Waggoner	Sec-41 Blk-4	H&TC
Waggoner	J8-Waggoner	Sec-25 Blk-4	H&TC
Waggoner	J7-Waggoner	Sec-25 Blk-4	H&TC
Staley-Wynne	R2-Waggoner	Sec-26 Blk-4	H&TC
Waggoner	2-Waggoner	Sec-18 Blk-4	H&TC
Apple-Brandenberry	3-Waggoner	Sec-32 Blk-4	H&TC
Empire	A6-Waggoner	Sec-32 Blk-4	H&TC
Empire	C12-Waggoner	Sec-25 Blk-4	H&TC
Bradstreet	B2-Waggoner	Sec-42	MEP&P

Wichita County

Hines	7-Burnett	.....	Meade
Continental	3c-Waggoner Bros.	Blk-21	George
Golding-Cochran	7M-Waggoner Bros.	Blk-22	George
Hammon	1-Waggoner	Blk-7	Willis
Texas	9-Waggoner	.....	George
United Prod	3-Allen et al.	Blk-29	KWVFL
Brayback Dev	1-Boyd	Blk-10	Lewis

Young County

Hawkins	3-Owens	.....	BBB&C
Perkins-Cullum	1-Lemon	.....	BBB&C
Wise-Jackson	10-Calvin	.....	Rohus
Steed-Gans	17-Snider	.....	Wilson
Boller-M&V et al	2-Hunt	Sec-160	TE&L
Boller-M&V et al	3-Hunt	Sec-160	TE&L
McMeans	1-Eichelberger	Sec-1454	TE&L
Bradstreet et al	3-Richardson	.....	Mauphin
Parks et al	2-Carpenter	.....	Sergeant
Carpenter	2-Barrett	.....	Sergeant
Stafford	1-Farrow	Sec-283	TE&L
Franklin et al	1-Richardson	.....	Mauphin
Hynds et al	2-Criswell	.....	Reeder
Panhandle	1-Brown	Sec-290	TE&L
Panhandle	1-Pittman	.....	Deister

PANHANDLE

Carson County

Osborne et al	2-Perival	Sec-199 Blk-3	I&GN
Holmes et al	2-Moore	Sec-125 Blk-4	I&GN

Gray County

Shamrock et al	1-Clayton	Sec-50 Blk-25	H&GN
Phillips	6-Palmer	Sec-31 Blk-B-2	H&GN
Danciger	11-Jackson	Sec-88 Blk-B-2	H&GN
Wilcox	9-Wilcox et al	Sec-35 Blk-3	I&GN
Texas	5-Davis	Sec-8 Blk-1	ACH&B
Texas	3-B Chapman	Sec-69 Blk-25	H&GN
Texas	3-Shaw	Sec-5 Blk-1	ACH&B
Texas	6-Williams	Sec-6 Blk-1	ACH&B
Staugner-Meadors	1-Holloway	Sec-7 Blk-H	Wallace
Operators	5-Cook	Sec-30 Blk-B-2	H&GN
Operators	6-Cook	Sec-30 Blk-B-2	H&GN
Phillips	7-Palmer	Sec-31 Blk-B-2	H&GN
Phillips	8-Palmer	Sec-31 Blk-B-2	H&GN
White Eagle	1-Faulkner	Sec-29 Blk-B-2	H&GN

Hutchinson County

Marland	1-D Johnson	Sec-6 Blk-1	B&B
Alamosa	4-Sanford	Sec-85 Blk-46	H&TC

Moore County

Canadian River	1-Shelton	Sec-52 Blk-3	G&M

WEST TEXAS

Borden County

Louisiana	1-Long	Sec-322 Blk-97	H&TC

Howard County

Shell	1-Settles	Sec-135 Blk-29	W&NW
Owen-Sloan	13-Roberts	Sec-136 Blk-29	W&NW
Owen-Sloan	14-Roberts	Sec-136 Blk-29	W&NW
Moody	19-Roberts	Sec-136 Blk-29	W&NW
Moody	20-Roberts	Sec-136 Blk-29	W&NW
Moody	23-Roberts	Sec-137 Blk-29	W&NW

Hudspeth County

Richardson et al	1-Thaxton	Sec-9 Blk-16	PSL

Pecos County

Moncrief	1-Sullivan	Sec-70 Blk-11	H&GN
Landreth Prod	1-Univ.	Sec-13 Blk-18	Univ.
World	1-Univ.	Sec-31 Blk-16	Univ.
World	1-Univ.	Sec-13 Blk-18	Univ
Tidal	3-Univ.	Sec-17 Blk-20	Univ.
Kennedy et al	1-Kennedy	Sec-78 Blk-3	T&P
Phillips	2-Courtney	Sec-78 Blk-OW	T&M
Trees	1-Trees	Sec-43 Blk-8	H&GN
O'Mara et al	1-Streety et al.	Sec-1 Blk-105	Howard
O'Mara et al	1-Bennett	Sec-592	.....
Perren et al	1-Peterson	Sec-34 Blk-10	H&GN
Pecos Crude	3-Pecos Valley	Sec-22 Blk-10	H&GN

Presidio County

Brite	4-Brite	Sec-245 Blk-4	H&TC

Reeves County

Hansford et al	1-Williams	Sec-17 Blk-6	H&GN

Upton County

Pure	1-Hughes	Sec-4	Teers

Ward County

Marland	2-Sealy	Sec-81 Blk-A	G&MMB&A

Winkler County

Gulf Prod	B2-Daugherty	Sec-22 Blk-26	PSL
Humble	C-14-Hendricks	Sec-10 Blk-B-12	PSL
Shell	7-Scarborough	Sec-2 Blk-77	PSL

Completions in Texas, Week Ended July 27, 1929

NORTH CENTRAL AND EAST CENTRAL

Anderson County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Humble	3	Holloway	Roberts		T.D. 3633	20 (1 Hr.)

Brown County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Humble	12	Armstrong	Delgado	Sec-1 Blk-789	1211-1233	85
Jamellen	1	Wallace	Jackson	Blk-103	1063-1065	9.3M
Lloyd	22	Collier	Smith	Blk-139	445-449	3
McClung-Hickey et al.	1	Staggs	Thom	Blk-53	1600-1700	.3M
Owens et al	1	Connell	Arenback	Blk-3	1134-1145	25
Stewart et al	1	McGarfity	Thom		1622-1631	5
Estacado	1	Bull	Honeycutt	Blk-623	1145-1146	18
Anderson	5	Leather-wood	Delgado	Sec-11 Blk-789	T.D. 1407	Dry
Lloyd	17	Stanley	Smith	Blk-139	T.D. 442	Dry
Mitcham	2	Keeler	HT&B	Sec-39	T.D. 1534	Dry
United Royalties et al.	1	Chrane	Pratt	Blk-107	T.D. 960	Dry

Callahan County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Reiter-Foster	1	Ramsey	TE&L	Sec-3195	T.D. 310	Dry
Campbell	1	Jackson	ET	Sec-21	T.D. 1154	Dry
Crites-Williams	1	Robinson	D&DA	Sec-47	T.D. 836	Dry
Humphries Bros.	7	Gary	D&DA	Sec-40	T.D. 737	Dry
Kleiner Bros.	1	Biggerstaff	SP	Sec-310	T.D. 1125	Dry
Hart	1	Hart	D&DA	Sec-7	515-520	10
Bradstreet-Holden	2	Cavanaugh	Comal Co. Sch. Ld.	Sec-98	1687-1690	30

Coleman County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Cont. et al	12	Overall	GH&H	Sec-9	2147-2157	40
Eastland et al	3	Keeney	Cochran	Blk-269	1993-1999	24.5M
Midwest Explor.	2	Keeney	Cochran	Blk-269	2013-2028	12.8M
Anzac et al	1	Guthrie	Guthrie	Blk-112	T.D. 1652	Dry
Barbre-Ross	1	Farmer	Givens	Blk-10	T.D. 3004	Dry
Green-Midsun	1	Johnson	Flynn	Blk-245	T.D. 1034	Dry
White-Pinkerton et al.	1	Boyle	HT&B	Sec-13	T.D. 952	Dry
Taylor	2	Young Bros.	Greer	Blk-192	T.D. 2375	Dry
Tidal	1	Flippen	Deadrick	Blk-84	T.D. 2110	Dry
Weathered	1	Dalton	Slayton	Blk-156	T.D. 770	Dry

Eastland County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Alworth Trustee	2	Harbin	H&TC	Sec-4 Blk-4	T.D. 1522	Dry
Hickok Prod. & Dev.	3	Kimbrough	H&TC	Sec-44 Blk-4	T.D. 1605	Dry
States	6	Hines Est.	H&TC	Sec-17 Blk-4	1915-1926	3
Texas Pacific	4	Higgin-botham	H&TC	Sec-53 Blk-4	T.D. 4408	½M

Erath County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Fletcher-Moore	1	Cague et al.	Bishop		3264-3270	6M

Jack County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Staley	1	Terrel	Rockfellow	Blk-3	T.D. 740	Dry
Liebhart-Walton	1	Welker	SP	Sec-2	T.D. 650	Dry

Jones County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Callahan et al	1	Britton	Austin et al.	Sec-355	T.D. 3224	Dry
Clark et al	1	Dickinson	Williams		T.D. 2501	Dry
Trett	1	Hodges	Bell	Sec-6	T.D. 2000	Dry
Phillips	4	Pomroy	T&P	Sec-16 Blk-19	2500-2503	15

Milam County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Chapman et al	1	Gilchrist	Acosta		T.D. 2431	Dry

Navarro County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Riverland	1	Finch	Hardeman		T.D. 2752	Dry

Shackleford County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Big States	8	Webb	T&P	Sec-17 Blk-11	T.D. 896	Dry
Fenoglia et al	1	Nail	ET	Sec-49	T.D. 1450	Dry
Kingwood	2	Gorsuch	T&P	Sec-82 Blk-13	T.D. 2168	Dry
Roeser-Pendleton	1A	146-Cook	ET	Sec-146	T.D. 1625	Dry
Shaheen et al	2	Whitney	Leahy		T.D. 606	Dry
Humble	2	Newell	ET	Sec-87	1314-1445	8
Roeser-Pendleton	4	A88-Cook	ET	Sec-88	1350-1365	25
Roeser-Pendleton	5	A88-Cook	ET	Sec-88	1384-1388	12M
Roeser-Pendleton	6	A88-Cook	ET	Sec-88	1373-1384	15M
Cranfill-Reynolds	1	Flippen	T&P	Sec-35 Blk-11	908-917	5M

Stephens County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Mid Tex	9	Cunningham	TE&L	Sec-1210	3183-3203	20
Cranfill-Reynolds	1	Bussell	T&P	Sec-63 Blk-6	2116-2117	15
Poee-Ward et al	3	Norton	TE&L	Sec-1218	3261-3267	33M

Throckmorton County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
McCurdy et al	1	Reynolds L. & C Co.	Lambshead		T.D. 1509	Dry

NORTH TEXAS

Archer County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Brown Farm	5	Brown	SP		1581-1594	25
Burns	3	Wilson	ATNCL	Sec-114	1220-1239	25
Continental	1	Falls Co. Sch. Ld.	FCSL	Blk-16	1089-1107	36
Gohlke	6	Wilson	Geraldine	Blk-25	1576-1582	15
Humble	2	Logan	Taylor	Blk-26	1155-1158	30
Humble	9	Logan	Armes		1098-1112	40
Humble	10	Logan	Armes		1114-1125	25
Maxon Jr.	1	Green	Levins		1100-1110	7
Pet. Prod.	5	Kunkel	BBB&C	Sec-3	1159-1183	60
Shappell	7	Lyles	Hooper et al.	Sec-7	1703-1707	60
Sheldon	2	Chilson	DCSL League-3	Blk-2	1777-1779	5
Boller	1	Peters	I&GN		T.D. 740	Dry
Clark-Kruger	1	Durham	Harris	Blk-52	T.D. 1492	Dry
Fain-McGaha	1	Cranfill et al.	Rodemeyer		T.D. 1672	Dry
Hammon	1	Hawley	SP	Sec-2	T.D. 1854	Dry
Madden	1	Anderson	BBB&C	Blk-8	T.D. 1350	Dry
Moran Drlg.-Ruff	1	Richardson	BBB&C	Sec-11	T.D. 1250	Dry
Nix	1	Matlock	Toby	Blk-25	T.D. 714	Dry
Peacock	1	Williams	Swing		T.D. 590	Dry
Underwood Drlg.-Atlantic	1	Andrews	TE&L	Sec-1805	T.D. 954	Dry
Young	1	Fee	Pickens		T.D. 1306	Dry

Cooke County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Kewanee	2	Hair	Lockhart		T.D. 1575	Dry
North Texas	1	Will	Bond		T.D. 1781	Dry
Benson Bros	1	Kamp	Burdett		760-761	28

Montague County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Farlyn	1	Cunningham	Norten		922-930	28

Wichita County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Proctor-Parks	1	Hamilton	Lewis		T.D. 2007	Dry
Reno et al	1	Williams et al.	McCool	Blk-5	T.D. 1932	Dry
Stumpf-Empire	1	Anderson et al.	KWVFL	Blk-56	T.D. 1953	Dry
Humble-Hines	1	Burnett	Carroll		T.D. 1990	Dry
Riner-Bailey	8	Michie	Netherly		1774-1786	75
Texas	7	A-Waggoner Bros.	George	Blk-28	1285-1299	220
United Prod. et al.	2	Allen	KWVFL	Blk-28	1749-1751	43
Golding-Cochran	6	M-Waggoner Bros.	George	Blk-22	1291-1301	210
HiLand	1	Chilson et al.	DCSL	League-4 Blk-9	1806-1811	100

Wilbarger County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Wichisan	1	Waggoner	H&TC	Sec-21 Blk-4	T.D. 1883	Dry
Staley-Wynne	1	Waggoner	H&TC	Sec-9 Blk-4	T.D. 2004	Dry
Richfield	c1	Waggoner	H&TC	Sec-47 Blk-3	T.D. 2276	Dry
Richfield	B1	Waggoner	H&TC	Sec-45 Blk-2	T.D. 2705	Dry
Hart	1	Waggoner	H&TC	Sec-9 Blk-4	T.D. 2025	Dry
Waggoner	J-3	Waggoner	H&TC	Sec-25 Blk-4	1885-1888	600
Staley-Wynne	G-7	Waggoner	H&TC	Sec-32 Blk-4	1851-1862	40
Staley-Wynne	G-4	Waggoner	H&TC	Sec-32 Blk-4	2390-2394	125
Shaw	G-6	Waggoner	MEP&P	Sec-40	1851-1876	236
Phillips	NN-22	Wagg.	H&TC	Sec-42 Blk-4	2290-2293	175
Phillips	DD-3	Wagg.	H&TC	Sec-42 Blk-4	2276-2300	35
Phillips	DD-2	Wagg.	H&TC	Sec-42 Blk-4	2277-2295	76
Phillips	5	Waggoner	H&TC	Sec-18 Blk-4	2362-2368	211
Lewis Prod	B-2	Waggoner	H&TC	Sec-17 Blk-4	2412-2428	220
Knight et al	A-4	Wtggoner	MEP&P	Sec-40	1858-1876	250
Easter	E-1	Waggoner	H&TC	Sec-22 Blk-4	1926-1931	100
Consolidated	O-4	Waggoner	MEP&P	Sec-40	1859-1874	400
Barkley-Meadows	C-9	Waggoner	H&TC	Sec-5 Blk-5	1864-1885	95

Young County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Boller-M&V. et al.	1	Hunt	TE&L	Sec-160	1016-1019	15
Bradstreet	1	Mathews	Rohus		719-724	29
Kleiner et al	31	Langston	TE&L	Sec-1490	539-554	10
Parks et al	1	Carpenter	Sergeant		580-600	60
Perkins-Butler	2	Whit	TE&L	Sec-160	1018-1023	15
Stafford	1	Brown	TE&L	Sec-290	554-557	60
Bridwell-Clark	3	Cullers	YCSL	Blk-25	T.D. 620	Dry
Southern-Gray	1	Cullers	Stinnett		T.D. 701	Dry

PANHANDLE

Carson County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Midwest Explor.	1	Cooper			3085-3121	305
Empire	5	Magnolia Fee	I&GN	Sec-91 Blk-4	3140-3148	225

Gray County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Phillips	3	Palmer	H&GN	Sec-31 Blk-B-2	2870-2880	4000
Operators	3	Cook	H&GN	Sec-30 Blk-B-2	2833-2839	1798
Danciger	2	Shell et al.	ACH&B	Sec-5 Blk-1	2671-2678	2046
Cockrell-McIlory et al.	2	McConnell	I&GN	Sec-174 Blk-3	3190-3252	60
Champlin	1	Faukner	H&GN	Sec-30 Blk-B-2	2830-2920	266
Wilcox	7	Wilcox et al.	I&GN	Sec-60 Blk-3	T.D. 3015	Dry

Wheeler County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Upham	1	Mengeis	H&GN	Sec-71 Blk-17	T.D. 1870	7½M
Lela	6	Williams et al.	H&GN	Sec-9 Blk-27	2189-2239	65

WEST TEXAS

Irion County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Irion County Drlg.	1	Tankersley	GC&SF	Sec-25	T.D. 1398	Dry

Loving County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Lockhart	2	Hazel	H&TC	Sec-84 Blk-33	4190-4233	153 (15 Hrs.)

Mitchell County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Spence et al	1	Brown	Texas Pacific	Sec-37 Blk-25	T.D. 2000	Dry

Pecos County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Rio Pecos	2	Yates	H&GN	Sec-543 Blk-1	T.D. 1336	Dry
Adams	1	Univ.	Univ.	Sec-12 Blk-17	T.D. 1990	Dry
Mid-Kansas-Transc.	28	Yates	Vacancy strip	Sec-34½	T.D. 1195	825½ (1 Hr.)

Runnels County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Filton et al	1	Cramer	Taylor		T.D. 3966	Dry

Winkler County

Company	Well	Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Skelly	C2	Hendricks	PSL	Sec-10 Blk-B-12	T.D. 3136	Dry
Tidal	1	Scarborough	PSL	Sec-1 Blk-C-22	3040-3054	220
Southern Crude	T88U8	Hendricks	PSL	Sec-41 Blk-26	2755-3037	104
Southern Crude	T88P2	Hendricks	PSL	Sec-28 Blk-26	2892-2942	11 (1 Hr.)
Southern Crude	T8803	Hendricks	PSL	Sec-28 Blk-26	2803-2818	100 (1 Hr.)
Southern Crude	T88CX3	Hendricks	PSL	Sec-21 Blk-26	2761-2808	9763
Gulf Prod.	1	Daugherty	PSL	Sec-22 Blk-26	2745-2882	1268 (1 Hr.)
Humble	C-12	Hendricks	PSL	Sec-10 Blk-B-12	2829-2916	134 (1 Hr.)
Humble	1	Walton	PSL	Sec-48 Blk-26	2850-3050	216

Completions in North Louisiana and Arkansas, Week Ended July 25, 1929

Lousiana—Caddo Parish

Company	Well	Location	Depth	Yield
Palmer Corp	Hunter No. 1	8-19-14	2401	40 bbls.
Standard Oil of La	Henderson No. 2	7-19-14	2407	25 bbls.
Standard Oil of La	Hunter No. 5	17-19-14	2411	10 bbls.
W. D. Chew	Fee B-1	33-21-16	1855	15 bbls.

LaSalle Parish—White Sulphur

Company	Well	Location	Depth	Yield
Tunica Pet. Co	L.&A. No. 47	17-7-2E	818	10 bbls.

LaSalle Parish—Urania

Company	Well	Location	Depth	Yield
O. W. Clark, Trustee	Tullos No. 8	23-10-1E	1494	150 bbls.
Louisiana O. R. Corp.	Tremont B-39	25-10-1E	1530	180 bbls.

Ouachita Parish

Company	Well	Location	Depth	Yield
Pipes & Mack	White No. 1	7-18-5E	2215	8M gas
Southern Carb. Co	Fee No. 53	23-19-4E	2234	2M gas

Richland Parish

Company	Well	Location	Depth	Yield
Southern Carbon Co.	Tegola B-1	5-15-6E	2505	salt water, abd.
W. C. Feazel	McCoy No. 1	33-16-6E	2452	35M gas
Northern La. Gas Co.	Boykin Relief Well No. 2	20-17-6E	908	cratered, abnd.
Palmer Corp	Miles No. 1	11-17-6E	2725	dry, aband.

Union Parish

Company	Well	Location	Depth	Yield
Edwin S. Hall	Spencer No. 2	36-21-3E	2131	38M gas
Interstate Nat. Gas Co.	Parks No. 1	23-20-3E	2146	6M gas

Webster Parish—Cotton Valley

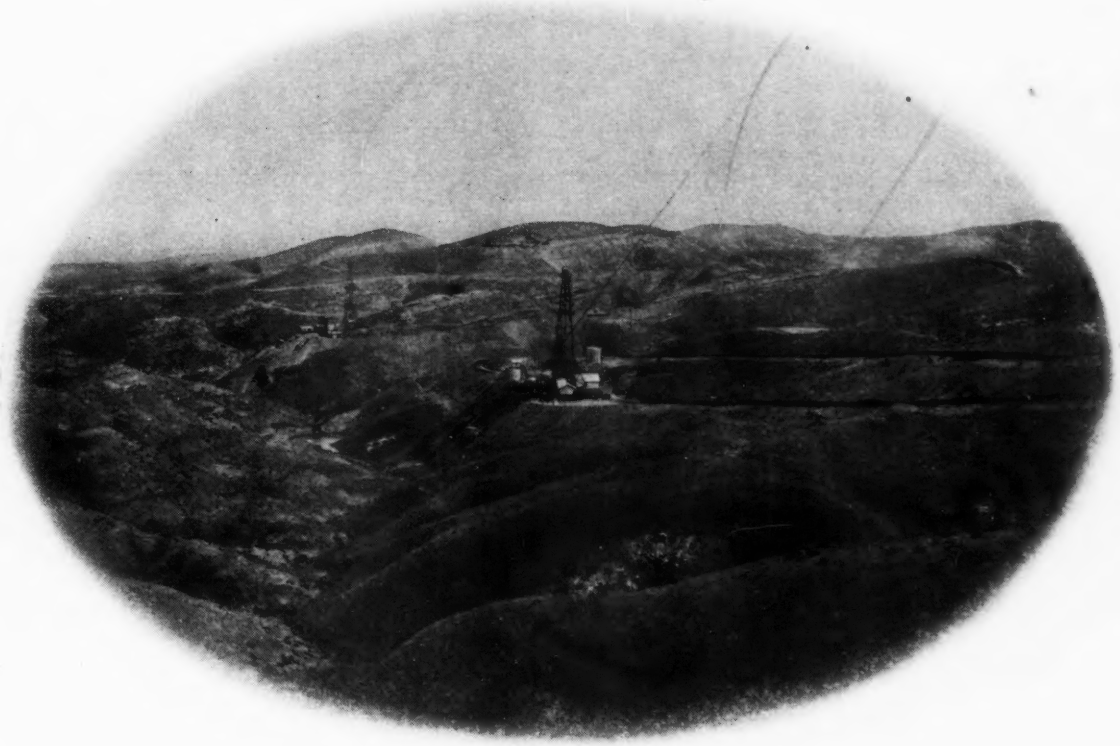
Company	Well	Location	Depth	Yield
Palmer Corp	Tillman No. 5	27-21-10	4681	1½M gas

Arkansas—Union County

Company	Well	Location	Depth	Yield
Bailey & Trimble	El Dorado Realty No. 1	7-17-13	768	junked, aband.
D. N. Stewart	Murphy No. 1	9-16-15	2405	20 bbls.
Johnson-Gummer Oil Co.	Cargile No. 1	4-18-13	3306	dry, band.

Kettleman Hills Is Developing Science of Deep Well Drilling

By Lester C. Uren
Professor Petroleum Engineering, University of California
(Written exclusively for National Petroleum News)



Roads must be built to well sites in Kettleman Hills as the first step in a development program

LESS than a year ago, the sharp grind of steel on steel, the clash of chains on sprockets and the hiss of steam from a lone engine exhaust could be heard on a barren California hill-top. For many miles about, almost as far as the eye could see, there was little to remind one of the activities of man.

Today that hill-top and the region about it presents a picture of great activity. Many miles of road have been constructed; water and power transmission lines have been brought from afar; many hundreds of workers are employed and living accommodations for them have been provided; fifty or more of the most expensive rotary drilling rigs ever assembled are at work; great stores of drilling equipment have been concentrated. Oil has been found in the Kettleman Hills!

Observing all that has been accomplished here in a few months' time, one cannot fail to be impressed with the rapidity with which our modern oil companies can throw their resources and personnel into the development of a new oil field.

The Kettleman Hills field, situated about 20 miles south of the old Coalinga field, on the west side of the San Joaquin Valley in southern Fresno county and western Kings county, California, is of unusual interest in several particulars.

It produces a higher grade of oil, from the stand-point of gravity and gasoline content, than any other major oil field yet discovered. The producing sands lie at great depth: the average producing well must be something more than 7000 feet deep.

Though only two wells have been drilled into the productive sand up to the time of writing, they are six miles apart and structural conditions are such that many square miles of land will probably be productive. In short, Kettleman Hills promises to become one of the world's greatest oil fields, and will undoubtedly play an important role in the California petroleum industry for many years to come.

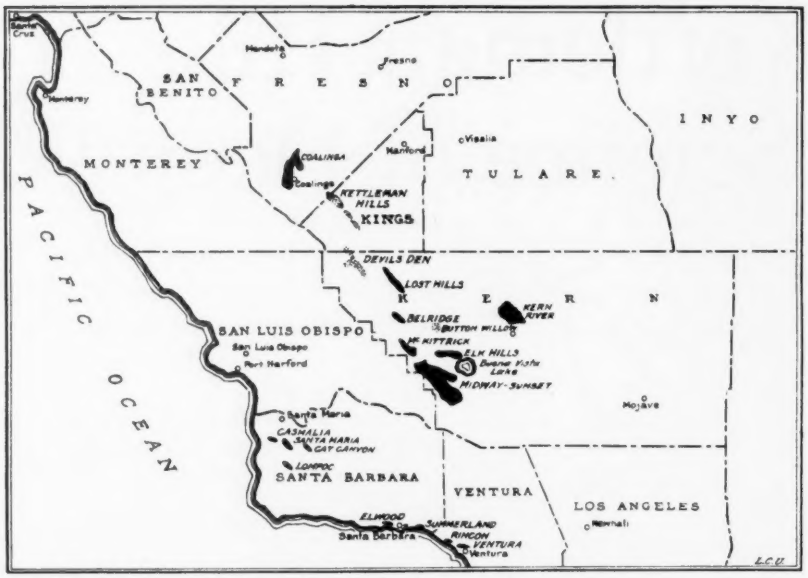
Individual wells in the Kettleman Hills field during the early development period, will probably cost upwards of $200,000 to drill and equip. The high cost of drilling, together with the high formation pressure and favorable drainage characteristics of the oil and the reservoir sand, have dictated an unusually wide spacing of wells. Operators on the north dome have adopted a development program which, for the present, permits drilling only one well to 20 acres. This provides for a minimum spacing between wells, on a triangular pattern, of 1167-feet, which seems very conservative in comparison with spacing programs followed in other California fields.

Land in the prospective area of the Kettleman Hills field is held, for the most part, by the larger companies,

which gives assurance that an orderly and conservative program of development will be followed. The Standard Oil Co. of California owns substantially half of the field in fee. Every odd-numbered section of land in this region was granted by Congress to the Southern Pacific Railroad Co. during the pioneer days. This land, later transferred to the railroad-controlled Pacific Oil Co., was a part of the prospective acreage which the latter company brought to the Standard Oil Co. of California at the time of the merger of the two companies.

The probability that a conservative program of development will be followed is also enhanced by the attitude of the National Government, which owns a royalty interest in practically all of the area of the field except that owned in fee by the Standard Oil Co. of California. Government officials have been making a sincere effort to induce operators to defer development and avoid an intensive development campaign during the present period of over-production.

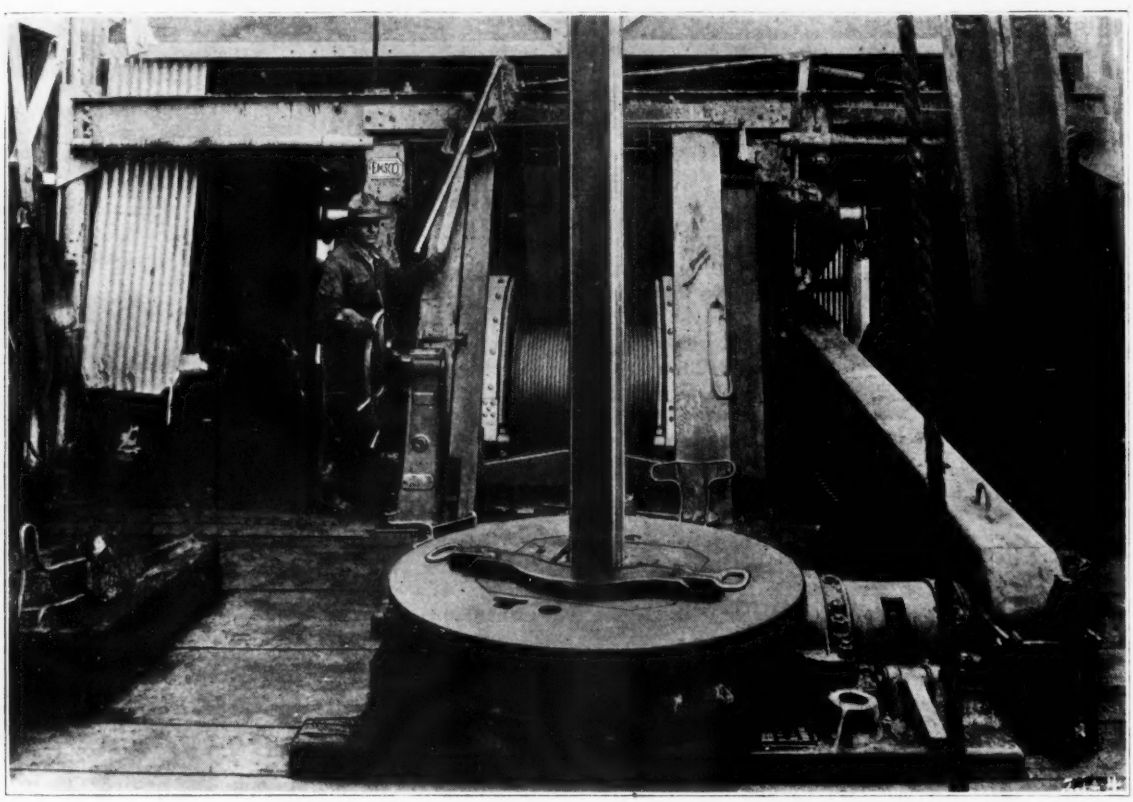
Special action by the Interior Department will be necessary to validate government leases under the program of deferred development recently agreed to by operators on the north dome. According to this agreement, except for offsets to the discovery well now producing and which, it is claimed, cannot be safely shut in, wells may be drilled to a point above the top of the productive sand, but not drilled in or allowed to produce until January, 1931. Operators on the south and middle domes have agreed to postpone all drilling until 1931.



Map showing relationship of Kettleman Hills to other San Joaquin Valley Fields

California's new gas conservation law also promises to prevent rapid development of the field, since the law provides that wells may not be allowed to produce until the gas accompanying the oil can be put to economic use or conserved by underground storage.

The only outlet for this gas that promises to be available in the near future, is the San Francisco Bay pipe line, now under construction. Though this is to have a capacity of 60 million cubic feet daily, it will scarcely take care of the gas production of the discovery well at the present time. The possibility of meeting the requirements of the gas-conservation law by storing the gas in a porous horizon above the oil sands and by repressuring the old Coalinga field, is also being discussed. Some such plan for gas storage on a large scale in or



(Courtesy Emsco Derrick & Equipment Co.)

Fig. 1—Illustrating type of heavy rotary equipment used in deep drilling in California Fields

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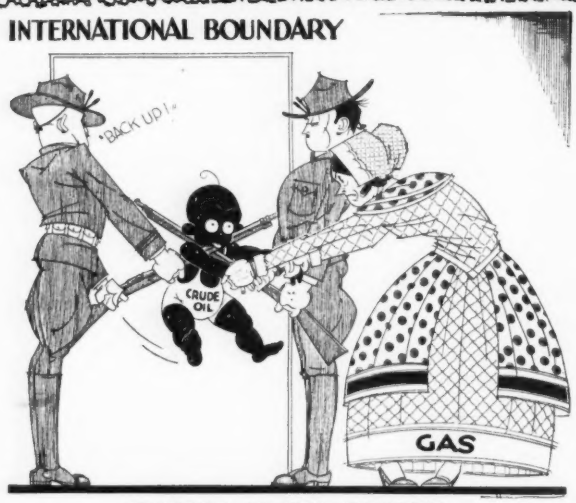

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near the field, must be adopted if the spirit of the new law is to be scrupulously observed.

The great depth of the productive sands, the high gas pressures that must be coped with in drilling, the existence of very porous formations at certain horizons which make it difficult to maintain circulation in rotary drilling and the high ground temperatures encountered, rendering cementing of casing difficult, are among the many problems presented in drilling wells in this field.

The effective way in which these problems are being solved is evidence of the high degree of engineering skill and ingenuity in the technical personnel employed by the operating companies. Probably in no other oil field in the world can one find the science of deep drilling more highly developed than at Kettleman Hills.

The operators have, for the most part, adopted the heaviest and most modern rotary drilling equipment available. Both steam and electric-powered rigs are in use, but there is a larger percentage of the latter than is usual in other California fields. Of particular interest in this connection, are the Hild differential-automatic drive rotaries, which automatically control the drilling speed and maintain any desired bit pressure with uncanny precision.

A high degree of flexibility is secured on Hild drive rigs, by using two double-rated, variable-speed motors on the rotary equipment and draw works and a separate motor of the same type on each of the two pumps. In connection with the Hild electric drive, it is possible to secure continuous graphic chart records of power input, rotary table speed and bit pressure which tell every detail of rig operation and permit of valuable deductions concerning conditions in the well and the nature of the formations penetrated.

It is considered especially important in avoiding crooked holes in the drilling of these deep wells, to maintain bit pressures and table speeds appropriate for the particular type of rock in which the bit is operating. The Martin-Loomis weight indicator with continuous recording instrument is a device widely used throughout the field to aid the driller in maintaining whatever bit pressure may be desired, while the Brown electric recording tachometer is being used to some extent in securing a continuous record of table speeds.

A continuous automatic watt-meter record of the power input to the motors driving the rotary table, is at any time a measure of the torque on the drill stem. An effort is being made, through comparison of continuous records obtained in this way, with rates of progress at different horizons, to determine the drilling conditions that are best for each type of material penetrated. Such data should

be of great value in the subsequent development of this and other fields in which similar formations are encountered.

The rotary equipment in most cases uses a 24-inch or 27-inch rotary table, and for the larger diameter holes, an 8-inch kelly and drill stem. The three-shaft, six-speed draw works, used in conjunction with the Hild automatic drive, constitutes a preferred type. The six speeds are obtained through the use of a three-speed hoisting drum driven through a gear mechanism which is in itself capable of providing two different speeds for the line shaft. Every part of the draw works and table equipment is of the heaviest construction and strongest material obtainable. A novelty on some of the rigs is found in the wheel-type of brake control, instead of the usual lever-type control. The photograph reproduced in Figure 1 is illustrative of the type of rotary equipment being purchased by most operators for use in this field.

The derricks and related structures housing the drilling equipment are of steel construction throughout in most cases, 122 feet x 24 feet, heavily-braced steel derricks on concrete supports being customarily used. The California type of rotary rig is, of course, properly speaking, a "combination rig" in that complete cable-tool equipment is also provided and utilized as an essential part of the rig.

Double-deck crown blocks are now widely employed. Every modern safety feature, including enclosed ladderways and railings about the crown and at the elevations of the working platforms, are incorporated in the derrick design. Figure 2 shows a typical steel derrick of the California type, in process of erection.

A departure in the housing of the equipment is found in housing the circulating pumps and their power units in a separate structure apart from that which encloses the rig proper and rotary equipment. In addition, one of the companies is providing a separate instrument and control house and a portable core-storage rack at each well. These structures, together with the tankage for mud storage and special mud-mixing and settling equipment, provide a much more elaborate and costly group of auxiliary structures than is customarily found in an ordinary rotary rig. (See Fig. 3.)

Two Doheny-Stone rotary rigs are also being tested in competition with the usual type of rotary equipment in the Kettleman Hills field. In the design of this rig, Mr. Stone has struck out along lines which differ radically from orthodox rotary practice, and yet has achieved a thoroughly practical and well-coordinated result.

Though the Doheny-Stone rig differs in many respects from the ordinary type of rotary equipment, its chief distinction is found in the sup-

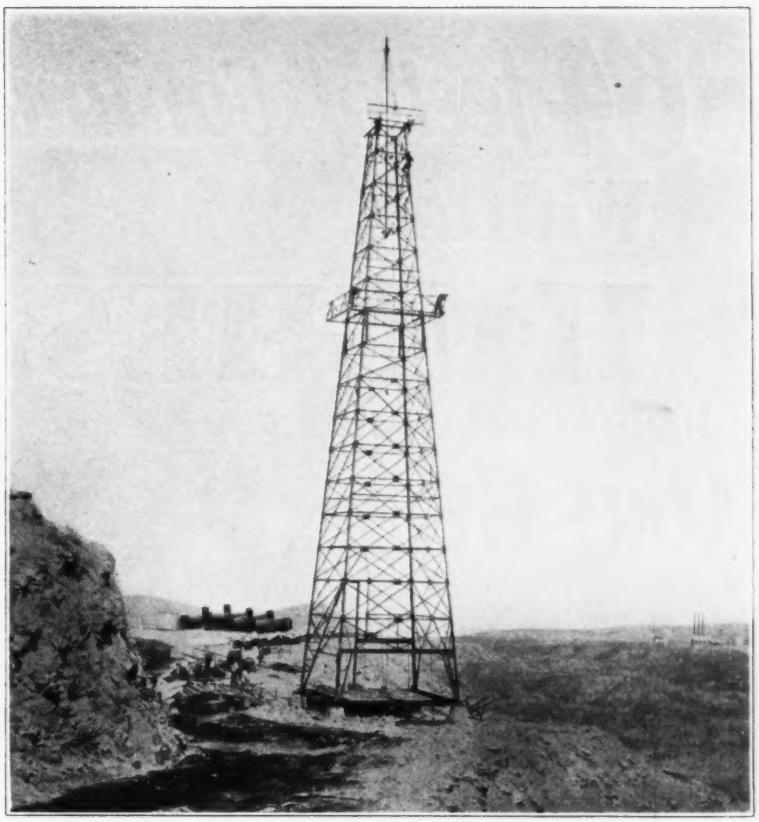

Fig. 2—Erecting a 122-foot steel derrick in the Kettleman Hills Field

Fig. 3—Typical well structure for housing combination rig, Kettleman Hills Field

864 feet of Continuous Coring With A HUGHES HARD FORMATION CORE BIT

85% Core Recovery

The above photograph was taken on the Texas-Pacific Coal & Oil Company's State No. 1, Lea County, New Mexico.

Coring was started at 3,131 feet and continued to a depth of 3,995 feet. An 8½" Hughes Hard Formation Core Bit was used and according to O. G. Waller, Tool Pusher on the job, approximately 735 feet of core was recovered—or 85 per cent.

Members of the crew of the Southwest Drilling Company, contractors on the well, are shown in the picture. They are: L. C. (Beanie) Cline, Driller; Burl Freeman, C. C. Turner, C. M. Tidwell, George Boone, and O. G. (Red) Waller.

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port of the full weight of the rotary table and drill stem on two powerful hydraulic jacks, which permit of close control of bit pressure, and which aid in many ways in the manipulation of drill stem and casing. (See Figure 4.) This rig appears to be particularly well adapted to deep drilling practice. Though it is by no means an experiment, local operators are watching its performance in the Kettleman Hills field with interest.

Operators have found it desirable to adopt the largest capacity and highest pressure mud pumps available in handling the large volumes of heavy circulating fluid necessary in drilling these deep, high-pressure wells. A variety of different makes and sizes of pumps are found in use. Among others, the writer observed several Wilson-Snyder, size 6 inch x 16-inch, electrically-driven pumps designed for 1500 pounds working pressure, and Gardner pumps of substantially equivalent capacity seem also to be popular.

For electrical operation, these pumps are conveniently powered with their own individual motors, using Tex-Rope triangular-belt drive. These pumps may also be had in steam-driven models, designed for hydraulic pressures up to 3000 pounds per square inch. Operation of pumps of this size represents an important part of the total power consumption of the entire rig. With electric power, separate watt-meters on the pump power circuits provide a convenient means of studying power consumption for different depths, sizes of hole and drill stem, type of formation, rate of progress and other factors which determine the rate at which the pumps must be operated.

The unusually high gas pressure encountered in drilling in this field is requiring that particular attention be given to the physical properties of the circulating fluid. Mud of more than usual density is used and operators maintain a careful check on the density of the circulating fluid by frequent tests made at the well.

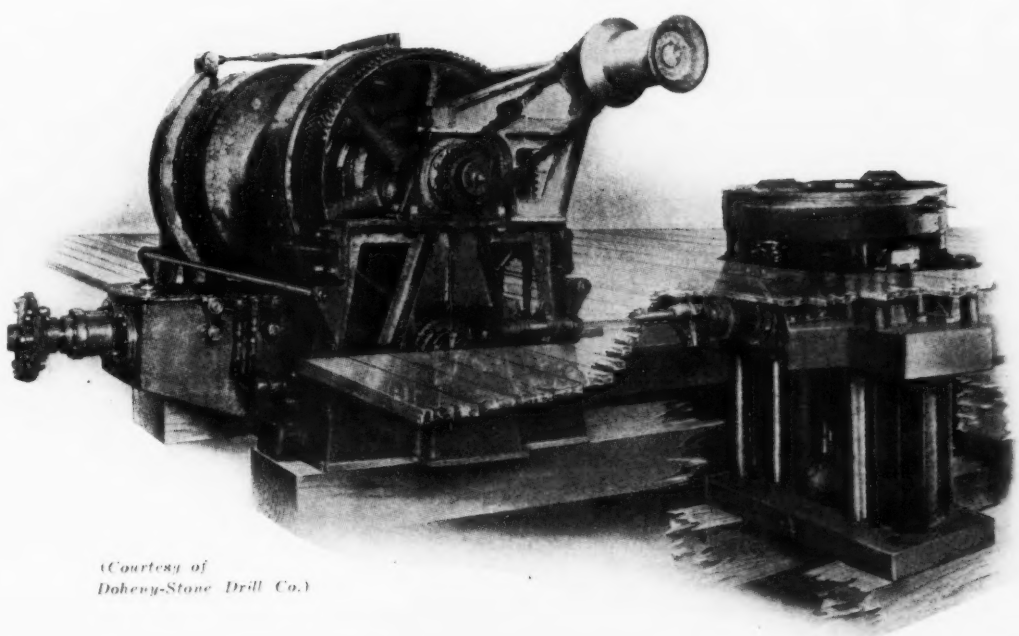
In drilling into high-pressure horizons, operators customarily increase the density of the fluid beyond normal limits by the addition of finely-ground barite or hematite. (See Fig. 5.) Barite is preferred by most for this purpose, and it must be so finely ground that all but a few per cent will pass 300 mesh. Fluid muds weighing as much as 15 or 16 pounds per gallon may be prepared through the use of these heavy colloidal minerals. Local surface clays are largely used in preparing the carrier fluid, though great quantities of "Aqua-gel," "Plastiwate" and other special clays have been used in preparing fluid for drilling through very porous, low-pressure sands in which it is difficult to maintain circulation. Cement, hydraulic lime and flaxseed hulls have also been added to the circulating fluid in different instances in combating this condition.

Large quantities of mud are necessary in penetrating the high-pressure gas zones, as the mud quickly becomes "gas-cut"— i. e., burdened with occluded gas bubbles—which reduce its density and effectiveness, requiring that it be discarded and replaced by fresh fluid. The cost of preparing mud fluid represents an important percentage of the total cost of drilling in some wells, particularly where large quantities of heavy mineral must be used and where the fluid must be frequently discarded. Efforts have been made to devise methods of reconditioning gas-cut and sand-laden mud fluid, involving filtration, elutriation, settling, etc., but without sufficient success to justify adoption of mud reclaiming devices as a standard part of rig equipment.

In order to be prepared for high pressures which may be suddenly encountered, some operators maintain a 4000-barrel tank of heavy mixed mud ready for use at each well. Manipulation of valves on the pump suction lines permits of quickly forcing a large volume of heavy fluid into the well. Extra men, in addition to the usual rotary crew of five, are continuously employed in some cases, merely to prepare mud fluid.

The casing program to be adopted has, of course, been a matter of careful consideration, inasmuch as a large part of the total cost of a well is represented by this item. Protection of the oil-bearing horizon against water incursion and provision for control of high gas pressure, however, are considerations of primary importance and California operators have learned not to consider cost when safety and protection against water are concerned. Indeed, a casing program adequate for these purposes is prescribed by state law and rigidly enforced by the state Oil and Gas Supervisor's Department.

Four "strings" of casings are necessary in this field. One of the larger operating companies is using an initial string of 20-inch—104-pound casing, which is carried to a depth of about 1500 feet. The next inside string is 13⅜-inch—72.5-pound cas-



(Courtesy of Doheny-Stone Drill Co.)

Fig. 4—Skeleton view of Doheny-Stone Draw Works and Hydraulic Feed Rotary Table

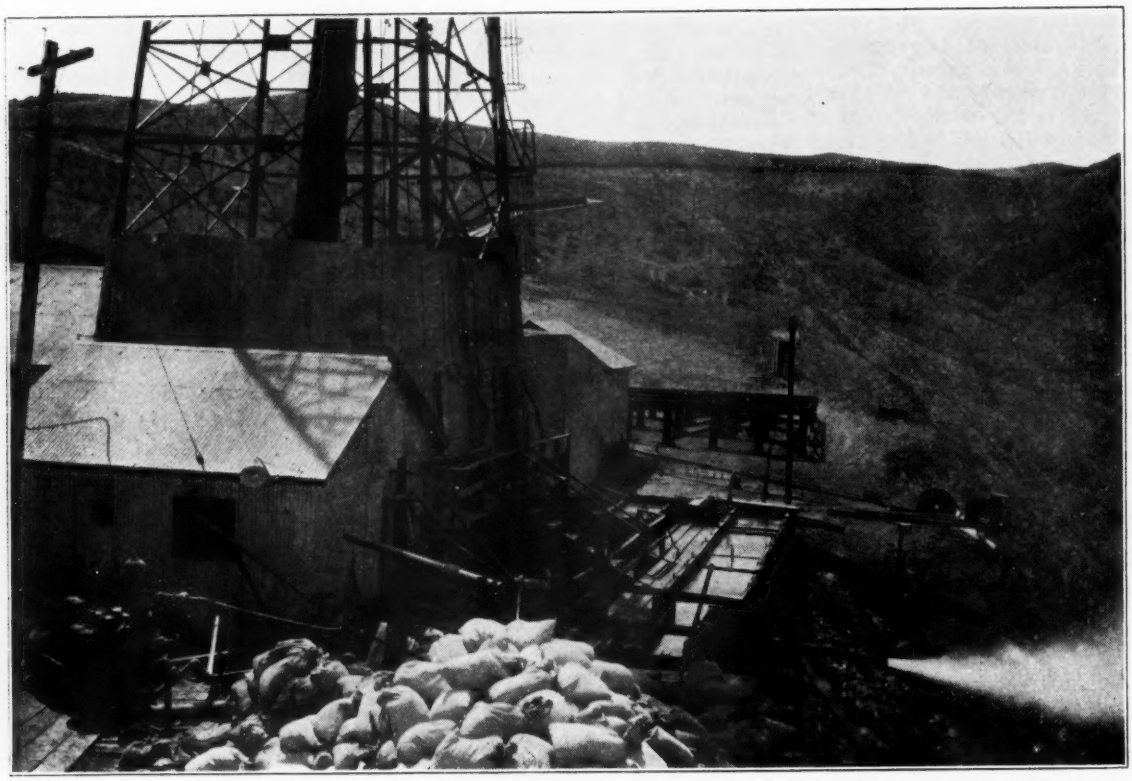


Fig. 5—Mud-settling troughs and facilities for adding heavy minerals and special clays to well fluid, Kettleman Hills Field

ing, which extends to about 5000 feet. Within this, a 6300-foot string of 9⅝-inch pipe is set. This is a special size and weight of pipe, manufactured to order. The oil string, which will extend to an average depth of possibly 7300 feet, will be of 6⅝-inch—29-pound pipe. Kobbe slotted screen pipe will probably be used opposite the oil sand. For this combination of pipe sizes, the initial diameter of the well must be about 27 inches. An alternative casing program which will permit drilling the wells with an initial diameter of 24 inches, provides an 18⅝-inch—11¾-inch—8⅝-inch—5¾-inch combination of pipe sizes.

Handling these long strings of heavy pipe in the wells demands the utmost in skill, materials and equipment. The 5000-foot column of 13⅜-inch pipe specified in the preceding paragraph, for example, weighs 181 tons. The heavier strings are customarily "floated in" by plugging the lower end, thus taking advantage of the buoyant effect of the well fluid in relieving the surface equipment of some of the weight. A special grade of seamless casing is preferred. Operators are in some cases favoring the use of special seamless casing of greater-than-normal strength, manufactured abroad and marketed locally by the American Seamless Tube Corp.

Abnormally heavy control equipment is provided on the casing heads to cope with the high gas pressures encountered. Though the "rock pressure" in this field has never been recorded by a closed-pressure gauge test, within the knowledge of the writer, it is probably about 2500 pounds per square inch.

The problem of water exclusion is met by cementing every string of casing except the oil string. This means three cementing jobs in every well. The first string of large diameter pipe is often cemented by entirely filling the space between it and the walls of the well up to the surface, with cement. In a 27-inch hole, 1500 feet deep, with 20-inch casing, from 200 to 1000 sacks of cement are used on the surface string. As much as 1500 to 2000 sacks may be used on the second string and 200 to 500 sacks on the third.

The Perkins two-plug method of placing the cement is exclusively used. Heavy mud is employed to force the cement down through the casing, and piping and valve control designed for rapid injection of mud fluid into the casing after the cement, is often a permanent part of the rig equipment. The necessity for getting the cement into position behind the casing before it takes its initial set, in mixing and handling such large quantities of cement in these deep wells, requires highly efficient mixing equipment and high pump pressures.

Equipment for handling the oil and gas after they reach the surface is receiving special attention. Maintenance of high pressure on the gas to accomplish its transmission without recompression and to reduce vaporization of the low-boiling fractions of the oil to a minimum, is leading some operators to provide gas traps of unusually heavy construction. (See Fig. 6). The oil develops unusually high vapor pressure and field storage tanks must be of a type providing vapor-tight construction to prevent evaporation losses.

The gas now produced is said to carry from 1.5 to 2.5 gallons of gasoline vapor per thousand cubic feet and is passed through a recovery plant operated by The Texas Co. This plant, as originally designed, was too small in capacity for efficient operation on the gas produced by the Milham discovery well, and has recently been increased to provide for a larger throughput and more efficient recovery. Late reports indicate that this plant is producing about 47,000 gallons of gasoline daily. The Standard Oil Co. also has a gasoline extraction plant about ready to begin operation, and it has recently been reported that the Marland and Shell oil companies will also erect gasoline extraction plants.

Except for the possibility, previously mentioned, of local storage and of repressuring of the oil sands in the Coalinga field, the surplus dry gas must find a rather distant market. Though the Pacific Gas & Electric Co.'s 282-mile gas transmission line now under construction and designed to transmit gas to the San Francisco Bay region markets, will originally have a capacity of only 60 million cubic feet daily, this may be increased to 125 million cubic feet by providing booster equipment at intervals along the line.

It is reported that two other utility companies are seeking permits from

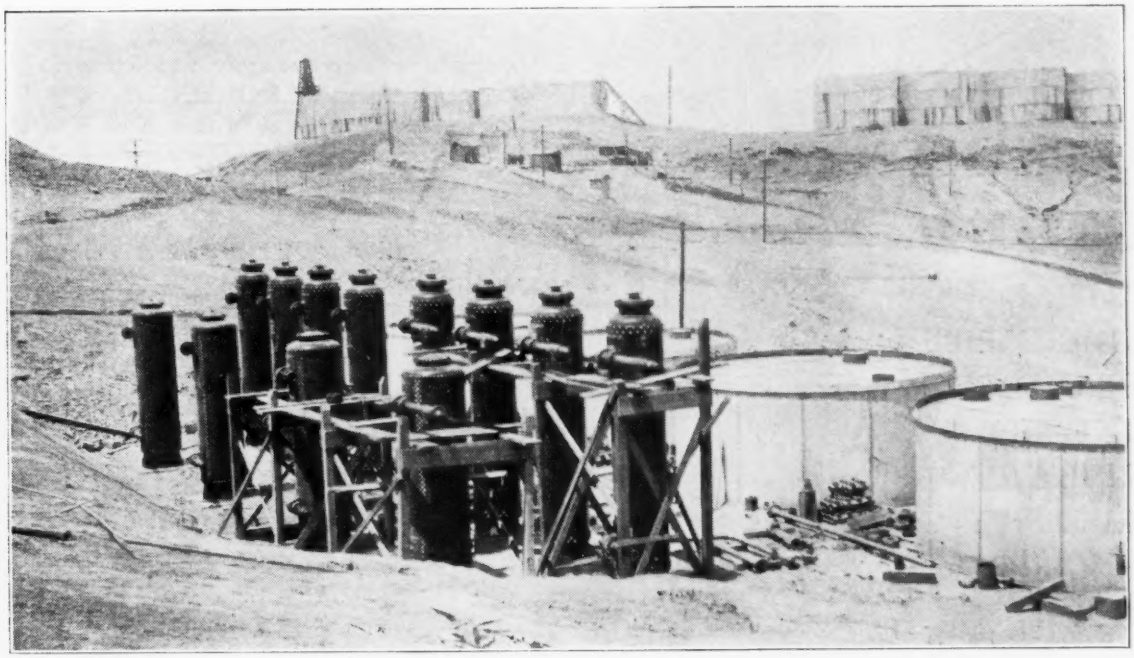


Fig. 6—High pressure traps and vapor tight flow tanks, Kettleman Hills Field

the State Railroad Commission to transmit gas by pipe line from the Kettleman Hills field to other smaller markets in central California. Another proposed gas-transmission project has southern California for its objective. Though southern California is at present amply supplied with natural gas, the advantages of connecting the Kettleman Hills with the lines now extending to Los Angeles and vicinity from the Midway-Sunset-Elk Hills area, are obvious. This would provide communication with southern California's extensive system of high-pressure gas transmission lines and would permit transmitting gas either north or south through a system of lines extending from Los Angeles to San Francisco, as surplus gas in various producing fields or market requirements in these two important marketing centers might dictate. Such an inter-communicating system would also permit wider distribution of gas to the older producing fields for storage and conservation purposes in meeting the requirements of Californa's new gas conservation law.

Thus far, oil has been moved from the field through a small pipe line built by the General Petroleum Corp., but leased to the Standard Oil Co. of California for operation. Surveys, however, are now underway for a new pipe line to be built by the Standard, extending over the Coast Range to tidewater, probably at Port San Louis, a distance of about 100 miles. The same interests are now erecting a new tank farm for oil storage on a tract adjoining the field. The government's royalty oil is at present being moved from the field in tank trucks.

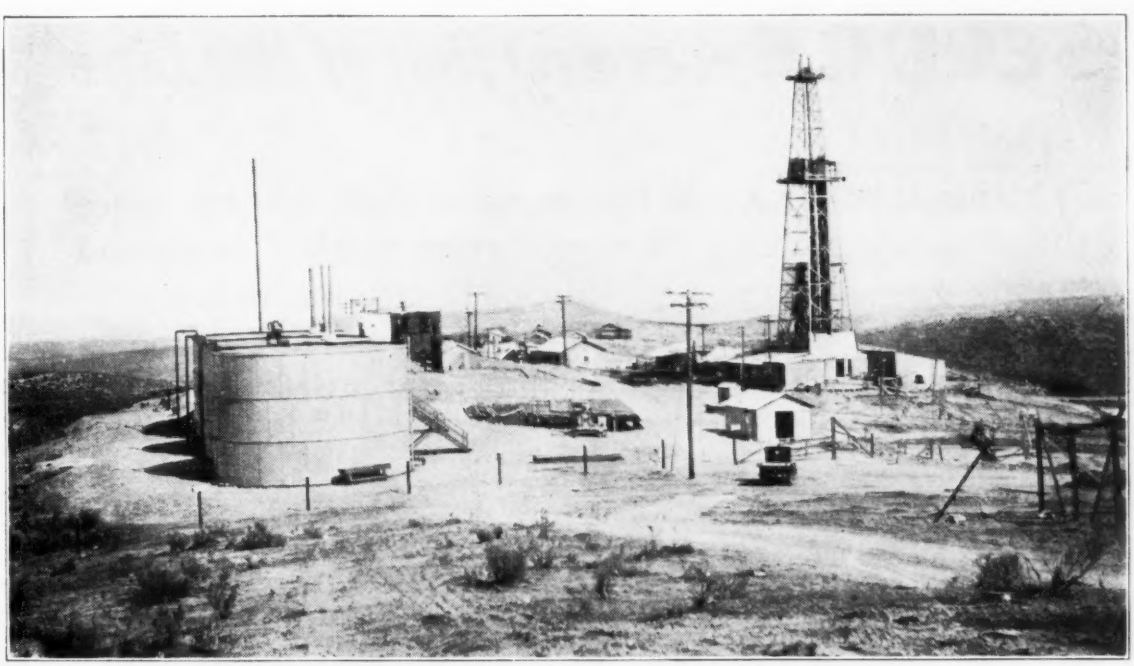


Fig. 7—General Petroleum Corp. Ochsner No. 2, second producing well in the Kettleman Hills Field

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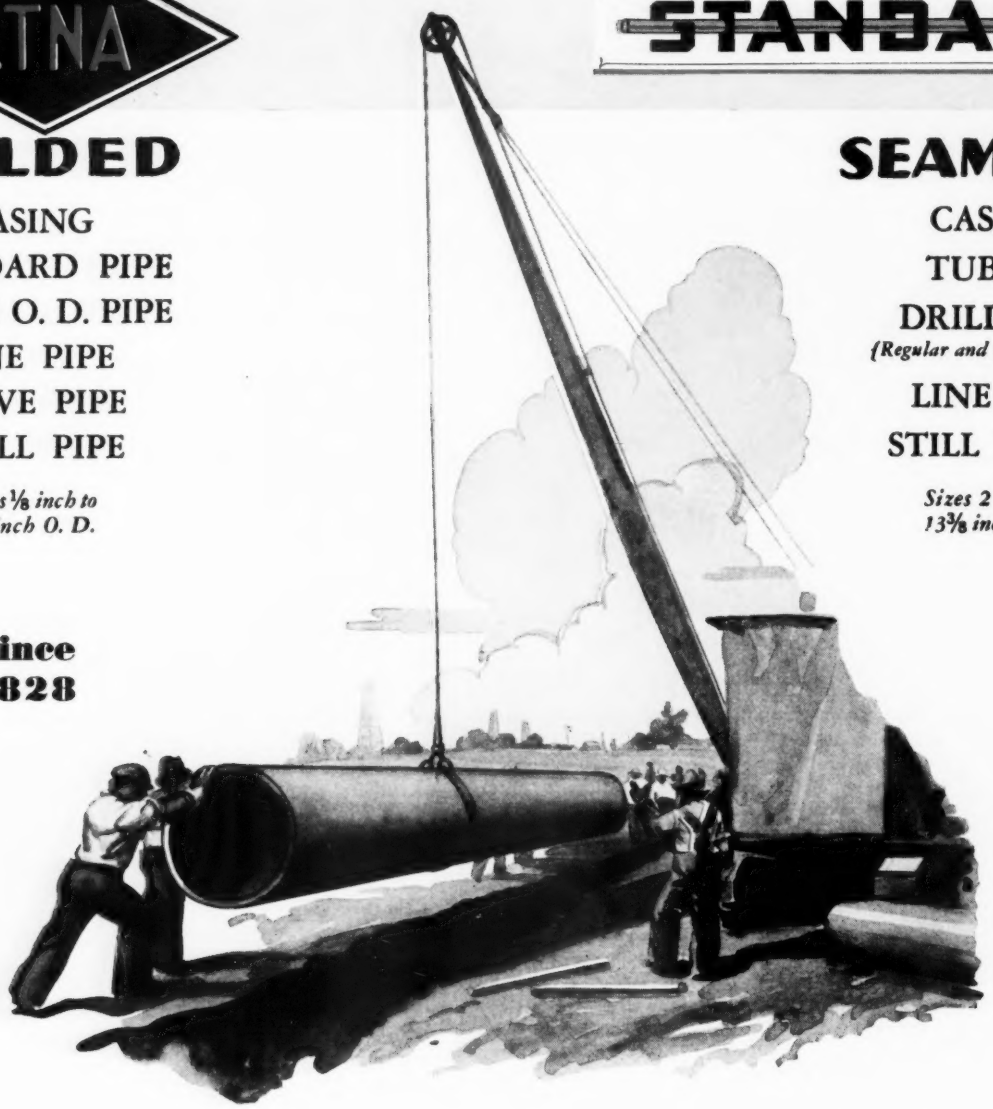

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New Patents

Prepared by R. E. Burnham, patent and trademark attorney, Continental Trust Building, Washington, D. C., from whom copies may be obtained at the rate of 20c each. State number of patent and name of inventor when ordering.

JULY 2, 1929

PRODUCTION

Pump-head for vertical deep-well pump—Herbert H. Van Winkle, Cincinnati, Ohio, assignor to Bonn Machine Co., same place. Filed July 10, 1926. No. 1,718,990.

Swab-release mechanism—Harvey R. Standlee, Tulsa, Okla. Filed Aug. 26, 1926. No. 1,719,028.

Overshot—John C. Stokes, Houston, Tex., and Frank C. Gignoux, Los Angeles, Cal., assignors to Reed Roller Bit Co., Houston. Filed Apr. 30, 1928. No. 1,719,144.

Air gas lift—Myron E. Wagner, Tulsa, Okla. Filed June 29, 1927. No. 1,719,249.

Rotary well-drilling apparatus—Earl A. Reed, Okemah, Okla. Filed Feb. 27, 1925. No. 1,719,340.

Combined valve, anchor, and packer—William H. Blakely, Tulsa, Okla. Filed Oct. 7, 1927. No. 1,719,582.

Hydraulic grab—James H. Bonner, Long Beach, Cal. Filed Mar. 9, 1927. No. 1,719,584.

Gas-lift starting-valve—Charles C. Carlisle, Cheyenne, Wyo. Filed Mar. 28, 1927. No. 1,719,589.

Coupling-connection for pump-rods—Arthur L. Ligon, Fort Stockton, Tex. Filed June 28, 1924. No. 1,719,664.

Method for the location of oil-bearing formation—Conrad Schlumberger, Paris, France. Filed Aug. 18, 1926. No. 1,719,786.

REFINING

Apparatus for mineral oil distillation—Arthur E. Pew, Jr., Bryn Mawr, and Henry Thomas, Ridley Park, Pa., assignors to Sun Oil Co., Philadelphia, Pa. Filed Mar. 13, 1925. No. 1,719,235.

Process of separating wax from mineral oils—Robert E. Wilson, Cambridge, Mass., assignor to Standard Oil Co. of Indiana. Filed July 18, 1922. No. 1,719,350.

Apparatus for cracking hydrocarbon oils—Harry L. Pelzer, Highland, Ind., assignor to Sinclair Refining Co., New York, N. Y. Filed Apr. 16, 1927. No. 1,719,486.

July 9, 1929

PRODUCTION

Fishing-tool—John Rutherford, Long Beach, Cal. Filed Aug. 1, 1928. No. 1,720,058.

Fishing-basket—John Rutherford, Long Beach, Cal. Filed Aug. 1, 1928. No. 1,720,059.

Temper-jack for standard cable tool and pumping wells—Orman W. Dickerson, Oklahoma City, Okla. Filed Oct. 1, 1928. No. 1,720,119.

Method and apparatus for determining the position of fluid-bearing sands while drilling wells—John D. Hackstaff and Labanna T. McCutcheon, Los Angeles, Cal. Filed Oct. 19, 1927. No. 1,720,325.

Pumping power unit for oil wells—Robert A. Dresser, Bradford, Pa., assignor to Petroleum Engineering Corporation, same place. Filed May 7, 1927. No. 1,720,514.

REFINING

Method of cracking oil in liquid phase—John C. Black, Destrehan, La. Filed Oct. 26, 1926. No. 1,720,070.

MISCELLANEOUS

Filling-valve for gasoline and like containers—Rupert E. Bateman, Downers Grove, Ill. Filed Aug. 2, 1926. No. 1,719,960.

Recovery of entrained oils from clay—George F. Olsen, Los Angeles, Cal. Filed Jan. 22, 1927. No. 1,720,144.

Art of pressing wax-containing oil—Frederick W. Sullivan, Jr., William J. McGill, and Harry L. Walker, Whiting, Ind., assignors to Standard Oil Co. of Indiana. Filed June 1, 1925. No. 1,720,300.

Mechanism for controlling liquid-dispensers—Joseph J. M. Gueux, Ivry, France. Filed Apr. 28, 1927. No. 1,720,597.

Extraction and purification of naphthenic acid—Stewart P. Coleman, Houston, Tex., assignor to Standard Oil Development Co. Filed July 30, 1927. No. 1,720,821.

Oil-recovery and gasoline-extraction apparatus—Irwin L. Dunn and Leslie C. Mingus, Tulsa, Okla., assignors to Dunn & Lewis, same place. Filed Aug. 2, 1926. No. 1,721,010.

Apparatus for the reclamation of lubricating oils—Clark F. Barb, Golden, Colo. Filed Aug. 18, 1925. No. 1,721,328.

Tycos Back Pressure Regulator

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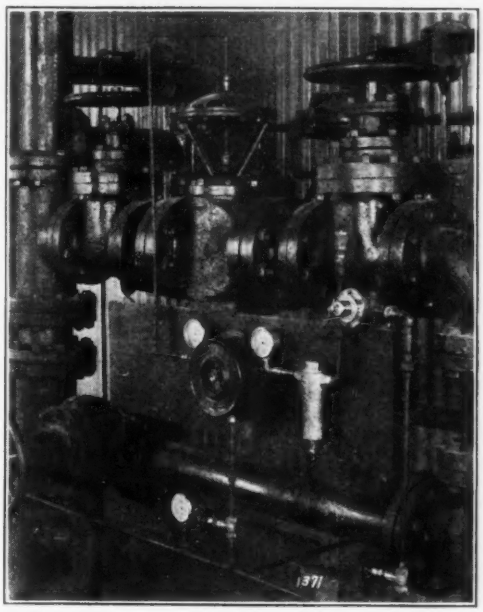

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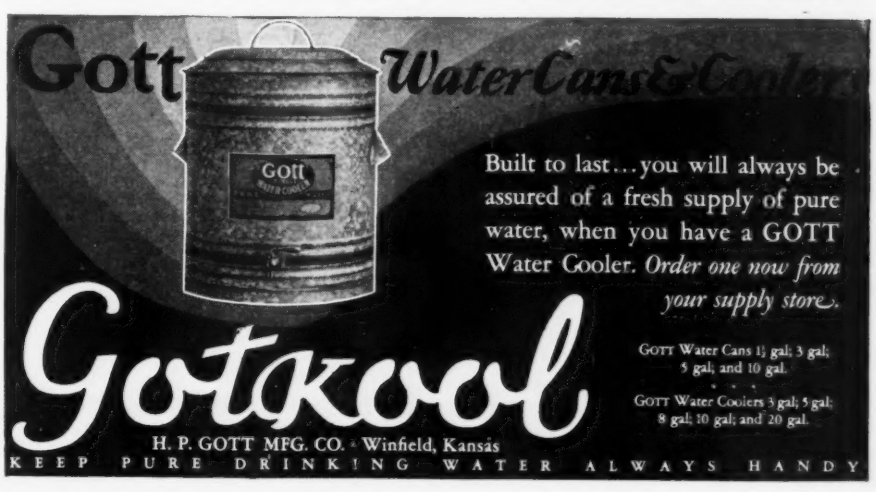
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Economical Operation of Small Wells As a Field Foreman Views It

HOUSTON, July 26

A FIELD foreman's idea of the economical operation of small wells marked one of the sessions of the Rio Bravo Oil Co.'s recent semi-annual conference in Houston.

In dealing with his subject, W. W. Lewis, field foreman at Electra, in the Greater Wichita Falls district, chose three major groupings: (1)—labor; (2)—material; and (3)—methods of pumping.

Vice president James Hutcheson, who developed the Rio Bravo's conference policy, holds similar conferences each January and July. Between times, he coordinates work of his superintendents and field foremen by having them visit all active fields of the company each spring. In the fall, he accompanies such of his key men as may be spared from the territory to the Petroleum Exposition at Tulsa.

To reduce and keep the payroll at the least possible figure, according to Mr. Lewis, the number of men must be cut to the minimum consistent with the efficient operation of the field. He says some little time may be necessary to gauge that minimum to which the working force can be reduced. Continuing, he says:

"Perhaps the most vital factor which will assist the foreman in reducing his payroll is the selection of 'all around' oil field men who can perform several kinds of lease work. In order to accomplish this it may be necessary, in some cases, for otherwise admirable and sound systems, such as seniority, to go by the board.

"Second only to the selection of men capable of looking after several different jobs, under the problem of reducing labor costs, comes cooperation, both among the men themselves and with their lease foremen.

"The methods of securing mutual assistance are too numerous to be dealt with here. Each locality has its own problems, which must be smoothed out as they arise. The question both with reference to the relation of the men with each other and to the man in charge is peculiarly up to the superintendent. Upon his shoulders must rest the failure or success. The main point is there must be full cooperation."

Material, given as the second main grouping for economical operations, is a problem which Mr. Lewis describes as "like the poor—always with us."

"The chief thing to remember regarding material," he says, "is to carefully select the best that is available and then go ahead. More is meant by the phrase 'to carefully select' than appears on the surface.

"You cannot carefully select material for a job without thoroughly understanding the job to be undertaken. As all know, and just between us men, an oil well is very much like a woman. Each has her own peculiarities. Unlike a woman, however, we can study her at close range and form some knowledge of her; and must do so to be in position to competently choose the material which will result in the most production without an added increase in cost.

"A certain item which will obtain satisfactory results in one well may fail to do so in another of relatively corresponding depth, with the same size pumping equipment. Hence, it is absolutely necessary to study the individual well.

"As a general rule, it has been my experience with small wells that the cheaper pumping equipment, such as the steel working barrel, gives better results than the higher priced patented specialties. Also, the smallest and lightest pumping equipment which will give desirable results is the best; as it is not only much cheaper but it also puts less strain on the jack, pull rods and power.

"After material is installed it should be carefully and systematically inspected. Where worn past repair the machinery parts or other material should be replaced. When they can be repaired to give full service this should be done and additional life secured."

Mr. Lewis refers to use of second hand material whenever possible, but urges careful selection so that its use will not result in breakdowns, leaks, loss of production and so forth. In this decision again enters the necessity for study of the individual well.

"It is an elementary proposition," he says, "that a well made to produce five barrels at a cost of $1 a barrel is more economically operated than the same well producing four barrels at a similar cost. If the loss of a barrel of production with the same operating cost is due to replacement with inferior material a mistake has been made; for second hand material should not be employed at the sacrifice of production."

Closing the subject of material brings Mr. Lewis to his third and last major division of the subject, methods of pumping. There can be no disagreement, he points out, that, except in isolated instances, the pumping power and jack lines offer the most feasible and profitable method of pumping small wells.

He asserts, however, that "a debate can be raised on the question of part time pumping; whether to pump wells whole or part time, and if the last mentioned—how long.

"It is desirable, even necessary, to pump some wells full time, especially those making large percentages of salt water, as otherwise the water may cut off the oil. Full time pumping is also essential where needed to obtain the total production of a well.

"The problem presented by the 'part-timer' is not whether or not to rest the well but how long. The decision lies entirely with experience. The well should be rested that 'heads up' and pumps off in a short time. This results in a saving in wear and tear on pumping equipment and on the power. Of equal, if not more importance this expedient prevents 'churning' of the fluid in the hole. As a result, you have less b.s. to contend with and you use much less treating chemical."

Reports show considerable increase in activity in the oil field of southern Vera Cruz, Mexico, with the El Aguila field producing 24,000 barrels daily; and two wells in the Tonala district, 1960 barrels.

* * *

Petroleum sales in the four Spanish provinces of the Malaga district in 1928 amounted to 136,227 barrels of motor gasoline, 829 of aviation gasoline, 14,333 of kerosene, 31,888 of gas oil, 22.790 of diesel oil and 88,438 of fuel oil.

* * *

The German Automobile Manufacturers' Association appears to favor the introduction of a gasoline tax and will advocate its adoption, according to the report of the recent commission to the United States.

* * *

Northbound cargoes of mineral oils through the Suez Canal during April, 1929, totaled 1,749.251 barrels, compared with 1.457,603 barrels in the previous month. Crude and fuel oil shipments originated at Abadan, Persia and the bulk of the oil was bound to Swansea, Great Britain.

Russian Engineer Describes Producing Operations of Azneft Trust

By John Power
N. P. N. STAFF WRITER

TULSA

EXECUTIVES of "Azneft," the giant trust which controls the domestic oil industry of Russia, spend but a few hours daily in their offices. According to a Russian petroleum engineer who is spending some months in this country, the chiefs of the organization, after a survey of brief but comprehensive reports of all activities of the preceding day, climb into their cars and are off for the fields, or refineries, or to inspect a new pipe line under construction. In this way they are in constant and familiar touch with the smallest details of the operations under their command.

Baku, a town of 500,000 population, is situated on the western shore of the Caspian Sea. In a rough semicircle north, west and south of Baku at a distance of about 10 miles, lie he principal group of Russian oil elds. The land, the wells, the equipnent and supplies, the pipe lines, railroads, electric plants, motor cars and trucks, tank steamers and telephones are all owned and operated by "Azneft" and its staff of 50,000 laborers and nearly 600 engineers. M. V. Barinoff, president of "Azneft," is also president of the polytechnical university at Baku, in which many of the company's engineers are trained.

The fields of Baku are producing in the neighborhood of 150,000 barrels of oil per day, worth approximately what U. S. oil of the same grade is worth. Specific gravity is the basis on which the oil is judged, with the fields production running from a light oil of about 0.715 specific gravity to the heavier oil of about 0.950 specific gravity.

There are more than 4000 producing wells in the fields, of which some 50 per cent are operated on the pump, 30 per cent on the air-gas lift, 15 per cent are flowing naturally, and some 5 per cent swabbing. All drilling and production methods are essentially the same as those employed in the United States. The wells vary in depth from approximately 2000 feet to the deepest at about 3500 feet.

There is one major point of difference, however, in the operation of the equipment. Everything is run by electricity. Giant steam turbines run the generators in one central, or main station, and in three sub-stations. The main station not only helps to furnish "juice" for the field operations, but it also supplies the current for lighting the city of Baku, running the street cars, and the other myriad uses to which electricity is put nowadays.

Part of the oil produced in the fields is refined in an up-to-date plant in Baku. The rest goes to a refinery, supplied by a new pipe line, in Batoun, on the shore of the Black Sea. Until recently, the latter refinery was supplied with oil in tank cars over a railroad connecting Batoun and Baku. Now, however, the 10-inch pipe line is expected to eliminate this expensive haul.

The refined products from the plant at Baku are used to supply the Russian demand, while those from Batoun are shipped abroad. The gasoline, etc., is taken by steamers from Baku through the Caspian Sea, and up the Volga River, by way of Astrakan. The problem of supplying the consumer in Russia is greatly simplified by the fact that there are practically no privately owned cars.

The gallonage problem is not one of the worries of the "sales" department of "Azneft," as the government owned cars are kept in government garages, and are checked out each day fully supplied with oil, gas, water, and—a driver. It is not considered the thing for the owner to drive his own car in Russia, a chauffeur being de rigeur.

Taxi cabs are plentiful and the fare is cheap, the cabs being owned by the government, and the taxi drivers on a government salary. The horse is still a popular prime mover of transportation equipment in the land of the vodka.

Costs are figured to the very smallest unit, the lack of competition and grumbling stockholders greatly simplify the bookkeeping. Drilling costs are figured to the foot drilled, or rather the meter, as the metric system is employed for all lineal measurements, while the production is measured in tons, as is the case in the South American fields.

Cost is the yardstick of measuring the various types of equipment, but cost per unit of output rather than initial cost is what is considered the most important. Labor is plentiful, the average number of employes per producing well being five and one-half.

The engineering school fostered by "Azneft" is quite an institution. Some 2500 students are taking the polytechnical course, the division directly under the supervision of the officials of "Azneft." Two years of practical field work is required for all graduates before they are given their sheepskins.

Most of the students work in the fields during their scholastic vacations, and so get in the necessary practical work. Student geologists do "sample grabbing," a monumental task, as complete samples are taken of every formation encountered in every well drilled.

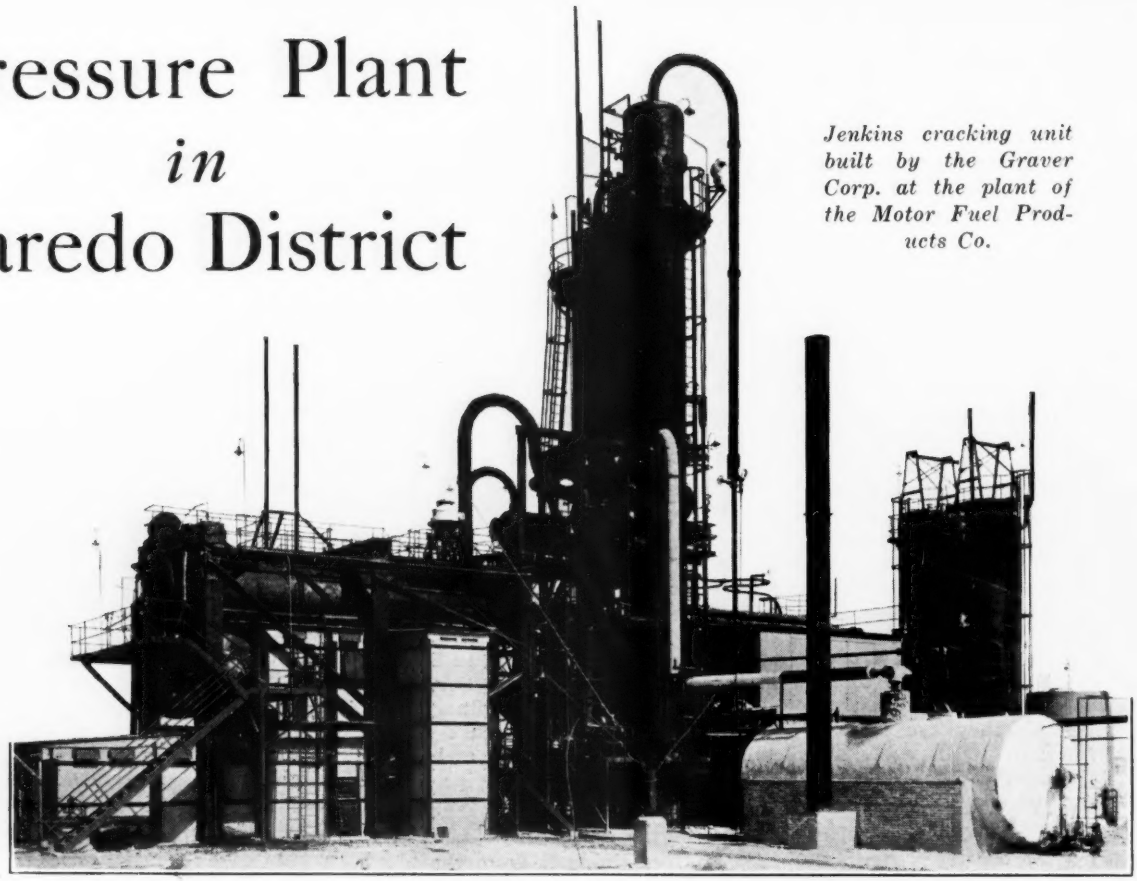
The geologist draws a little more water in the operation of the Russian fields than he does in the United States. Locations are made and wells drilled on his recommendation, and upon his recommendation only. Having no offset laws, nor no offsetting royalty owners, the geologists can space the wells in the manner in which they think will best drain the field, both from the standpoint of getting the oil out, and from the standpoint of economy.

The wells are drilled to the depths recommended by the "rock hound," and not a foot deeper, or a foot less. On his head be it if an oil well is drilled into water, or if a test is abandoned too soon. The writer's informant did not specify just what form of punishment was meted out to the unfortunate "pebble sniffer" who caused a well to be drilled into salt water, but the impression is most distinct that it is very severe, such as being shaved regularly in a government barber shop, or something equally terrifying.

Oil production in the Turner Valley field, Canada, has been nearly tripled since January. The May output was 88,302 barrels, the increase due largely to the production from Home Nos. 1 and 2 wells. Arrangements have been made for 10 new drilling contracts.

Crude production in Maracaibo, Venezuela, in May was 12,197,415 barrels, a daily average of 393,142 barrels, an increase of 6000 barrels over the daily average for April.

Pressure Plant *in* Laredo District



Jenkins cracking unit built by the Graver Corp. at the plant of the Motor Fuel Products Co.

Makes Anti-Knock Products

By Paul Wagner
N. P. N. STAFF WRITER

HOUSTON, July 26

DOWN in Laredo, Texas, is a plant that is manufacturing a product which is attracting attention from refinery technologists.

The plant is that of the Motor Fuel Products Co.; its primary product is offered the trade under the name of "Nox-O-No." This "Nox-O-No" is a concentrate, the solvent value of which is described as proportional to its benzol equivalent.

Benzol equivalent of the product is described as varying from 80 to 100, dependent on the type of equipment used for determining the equivalent.

A secondary product offered to the automobile and tractor trade under the name of "Whirlwind" is an anti-knock motor fuel that is a blend.

Both products are offered as containing no foreign or carbon-removing substances.

The Motor Fuel Products Co., which operates on crude produced in the Mirando territory of the general Laredo district, was organized about two years ago by S. P. Coblentz, a chemical engineer by profession. He is president and the technical genius of the organization, which is now affiliated with the United Gas Co.

Motor Fuel Products Co.'s plant, which was constructed at Laredo by the Graver Corp., was built on technical plans submitted by the company. It consists, briefly, of a Jenkins pressure unit; a Graver type continuous treater and the necessary pumps to make the working apparatus effective.

Steam power is supplied by a battery of boilers aggregating 300 horsepower, but, in this connection, the central pumping plant is electrically driven.

S. P. Coblentz, president and general manager, Motor Fuel Products Co.

Crude storage at the plant totals capacity of 72,000 barrels. The company purchases its crude supply, which is delivered at the plant in sellers' tanks.

Products are distributed in the company's own fleet of tank cars, which are aluminum painted, lettered in black, and which present an appearance of clean, cool efficiency calculated to stand out prominently in a mixed tank train.

The company sets out the following claims for its products that they are of high anti-knock value; that they possess more carbon solvent value; a higher useful power increase; low water jacket temperature value; that they are free of corrosion and sulfur and, finally, that they are doctor sweet and negligible in gum.

In the Indianapolis speedway classic, run May 30, Ted Simpson, racing a Miller special car, used the "Nox-O-No." He was so pleased with the result that he telegraphed President Coblentz of the Motor Fuel Products Co., at Laredo, that the concentrate worked perfectly in the

high compression car without knocking or pinging. He added:

"Was sixteenth in the twenty-seventh lap; moved up to fifth at sixty-fifth lap; forced out in one hundred forty-seventh lap by broken carburetor."

On the same day, in Worcester, Mass., Commodore Ross Maddocks won the speed boat classic over a large competing fleet. Commodore Maddocks piloted a boat of the baby whale type named Miss New England; and his power was derived from "Whirlwind Spirits."

It is pointed out, parenthetically, that "Whirlwind Spirits" is used specifically in the New England trade for "Nox-O-No."

United Gas Co., with which Motor Fuel Products Co. is affiliated, is an operating, managing, engineering and holding company of securities of public utility and allied undertakings. Its president is Odie R. Seagraves of Houston.

The holding company's tremendous expansion of the last 12 months has been reviewed by President Seagraves as follows:

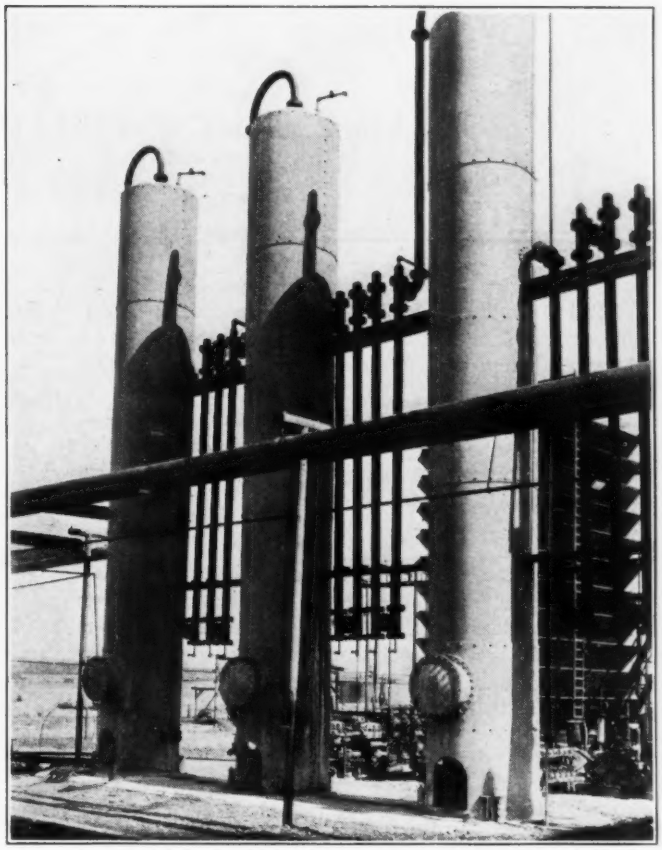
"United Gas, through its affiliated connections which produce, transport and distribute natural gas over a range of territory extending from the Monroe and Richland gas fields in North Louisiana to the Laredo gas fields in Southwest Texas, supplies more than 900,000 persons in the contiguous distributing centers. The company's territory ranges, therefore, an airline distance of some 500 miles.

"The major distributing centers where the company's gas is distributed through its several subsidiaries are Houston, San Antonio, Austin, Port Arthur, Beaumont, Laredo and Palestine.

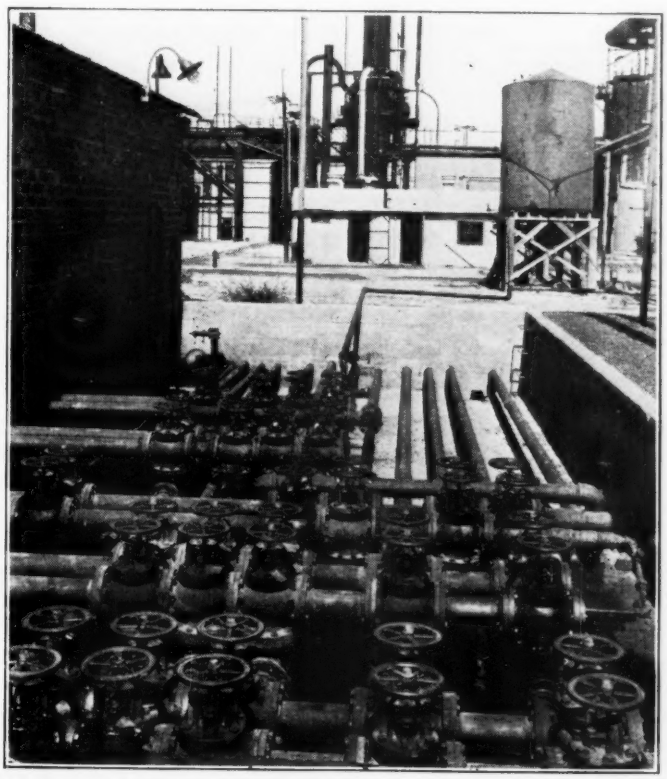
"In addition to the company's network of gas lines in Texas it has extensive affiliations elsewhere. Through its investments in Mississippi River Fuel Corp., Consolidated Gas Utilities and Natural Gas Securities Corp., the limits of the company's territory extend to such centers as St. Louis and Wichita, Kan., on the north, and El Paso, Texas, on the west.

"In addition to the production, transporting and distributing of natural gas, two of the controlled companies, Houston Gulf Gas Co., and Mission Drilling Co., are producing oil in the Refugio field of South Texas. These two companies control more than 80 per cent of the proved territory in the Refugio field.

"Another controlled interest, the Duval Texas Sulphur Co., is mining sulfur on the Palangana salt dome, in Duval county, Southwest Texas."



Graver continuous treating plant at Motor Fuel Products Co.'s refinery



Pump manifolds at the Motor Fuel Products Co.'s plant

Engineering Partnership Formed

TULSA, July 25.—Walter J. Podbielniak and Paul M. Raigordsky, both well known as chemical engineers announce they have entered into a partnership to carry on a consulting engineering business on all phases of natural gasoline plant design and operation. They have established analytical and research laboratories for fractional distillation analysis of gas, gasoline and oil samples, including testing of gasoline plant performance by making complete plant material balances. Offices are in the Philtower building, Tulsa.

Visiting Around the Refineries

By Paul Truesdell

National Petroleum News

THE Shell Development Co., (Shell Petroleum Co.) has recently taken out a license to operate the Gyro vapor phase cracking process developed by the Pure Oil Co. It is understood that the Shell has also taken a license to operate the vapor phase process of the Petroleum Conversion Corp. The Shell uses both Dubbs and Cross cracking processes but the Dubbs installations by far predominate in its refineries.

* * *

IT IS reported that the Pennzoil Co. of Oil City, Pa., and the Bradford Oil Refining Co. of Bradford, have recently placed orders with Max B. Miller & Co., for chilling towers designed to chill dilute oil to 40 below zero F., this to make possible complete removal of the wax from the oil. Direct ammonia expansion is the means used to bring the oil down to the final stage of chilling.

* * *

BRITISH oil technologists are turning anxious eyes on the possibilities for increasing the efficency of processes for cracking oil by decreasing the amount of coke formed in the operation. This is indicated by an article in the current issue of *Industrial and Engineering Chemistry* by Dr. A. E. Dunstan and R. Pitkethly of the Anglo Persian Oil Co.

Dr. Dunstan is chief chemist of the company and is also president of the Institution of Petroleum Technologists, the outstanding petroleum scientific society of Great Britain.

Pointing out that the usefulness of present day cracking processes is limited by the enforced production of coke, he describes a cracking process covered by a British patent issued to Beale, Coxon and Dunstan whereby heavy oil can be processed and the formation of solid carbon minimized through maintaining a high degree of turbulence in the oil and a relatively low velocity of flow. The turbulence is obtained, the authors state, by imparting to the oil surges that rapidly alternate in opposite directions.

Increasing the yield of gasoline from a charging stock and reducing the yield of coke or fuel oil is the initial goal aimed at by the Standard Oil Co. of New Jersey in developing the hydrogenation process.

* * *

WESTERN Oil & Refining Co. of Los Angeles is installing a vapor phase cracking plant to use the process of the Petroleum Conversion Corp. at its Wilmington, Cal. refinery, it is stated. The plant is being built by C. F. Braun & Co. and engineers of the Petroleum Conversion Corp. are also taking part in the construction work.

The cracking plant which will cost about $1,500,000, consists of units having a capacity of 2000 barrels a day each of finished gasoline when crude containing 25 per cent gasoline is used as the charging stock, it is stated in a company announcement. The process operates under 50 pounds pressure.

To quote from a statement of the Western Oil & Refining Co.,

"Heat is supplied to the oil vapor by mixing it with a hot, inert gas. This inert gas is produced in the cracking process itself and is continually recycled. The excess produced is drawn off and used as fuel or sold."

High yield of gasoline of high anti-knock value is claimed for the process.

* * *

BUILDING of refineries goes on in Europe and Asia as the world's peoples turn more and more to the automobile. Reports on some of these refineries are published in foreign trade notes of the Bureau of Foreign and Domestic Commerce of the U. S. Department of Commerce, as follows: Royal Dutch interests are about to build a refinery on the island of Csepel, near Budapest, Hungary. A French subsidiary of the Royal Dutch has built a refinery near Rouen, France. An oil refinery is to be built at Dunkirk, France, in connection with harbor improvements. A new company is to be formed in Japan to build a 2000-barrel a day refinery to operate on crude oil brought from the United States. Another company in Japan is planning to build a Dubbs cracking plant for the manufacture of gasoline.

From the same source, foreign trade notes, comes the report that the Japanese fuel research institute has succeeded in producing in an experimental way, one ton of petroleum from 2 tons of a low grade brown coal produced in Japan. The Nippon Nitrogen Co. is to build a plant to carry on the manufacture of gasoline from coal and is expected to have the plant running next year.

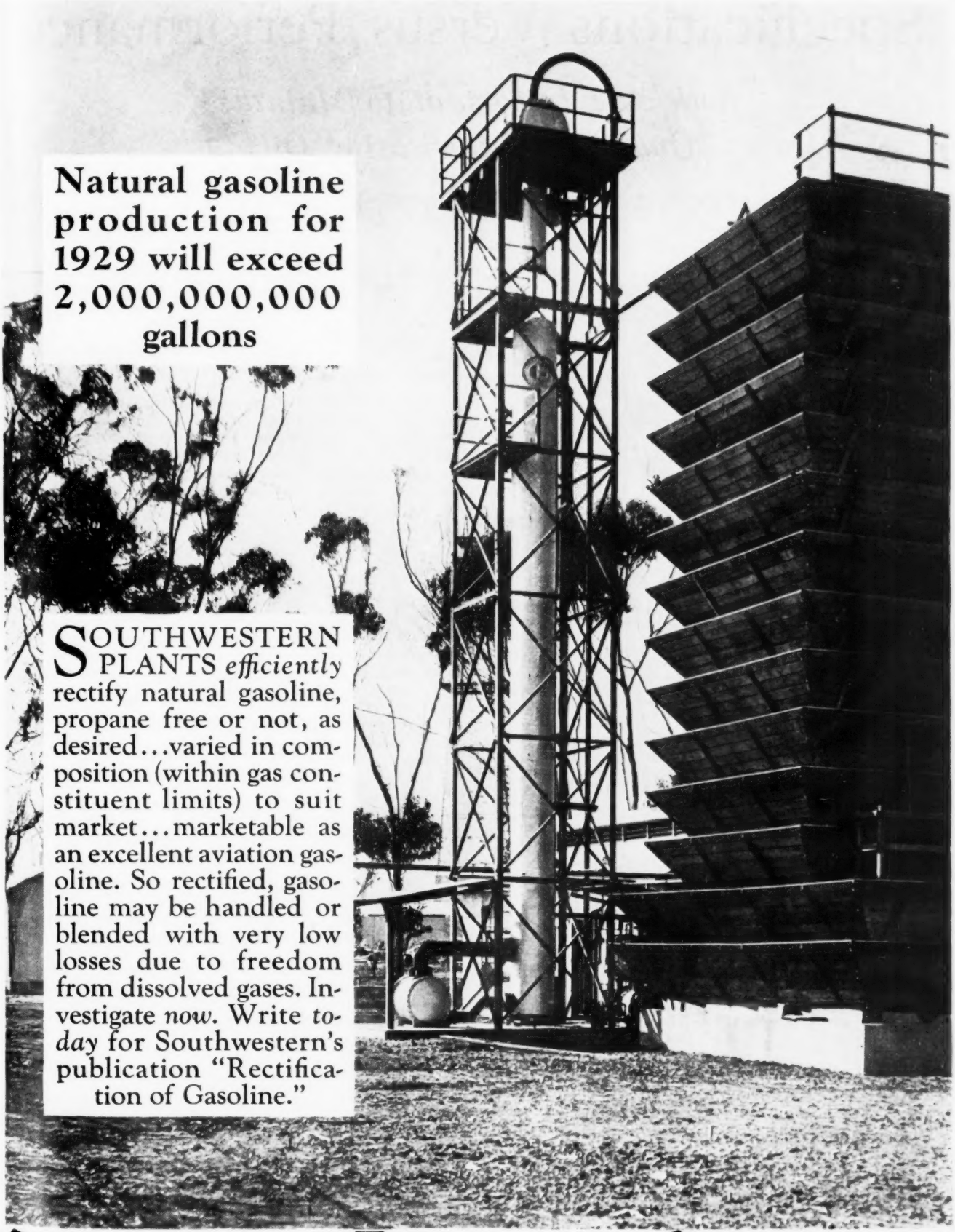
* * *

WHAT is said to be the largest vacuum fractionating tower in the world is pictured in *Heat Engineering*, house organ of the Foster-Wheeler Corp. The location of the tower is not stated but here are some of the facts stated in the skeleton description of it. Tower is 80 feet high inside with inside diameter of 18 feet 6 inches. Capacity, 6250 barrels per day of 50 per cent reduced crude, carrying the charging stock to 14 per cent bottoms. The Foster pipe still which heats the oil receives it at a temperature of 530 F. To recover resulting excess heat from the flue gases a 4-section plate air heater was installed.

The 50 per cent reduced crude is separated without rerunning into five closely cut products. Gas oil vapors are taken off the top of the tower, wax distillate, slop wax and cylinder are removed as liquid side streams. Flux bottoms are removed from the bottom.

* * *

IT IS reported that the Gulf Refining Co. has let a contract for a 10,000-kilowatt steam turbo-generator plant at its Port Arthur refinery to be coke and oil fired.



Natural gasoline production for 1929 will exceed 2,000,000,000 gallons

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Specifications Versus Performance

Both Are Important to Maintain Quality in Lubricating Oils

By R. Beattie* and F. R. Staley**

FORT WORTH

THE relative value of lubricating oil specifications as compared with the actual performance tests seems to have opened a wide field for discussion of late.

If some of the current articles were to be taken literally, in the near future such terms as flash and fire, viscosity, pour and carbon residue will only be known within the confines of the refinery. We can expect the salesman of the future to speak flowingly and at great length in such terms as work factor, endurance, film rupture, et cetera.

Instead of a neat set of 4-ounce sample bottles with typed labels in a black leather case, the ultra salesman may well be expected to appear with a traveling physical laboratory on a five-ton truck. Aided by a corps of scientific assistants he can preach the gospel of performance to hard-boiled purchasing agents to their mutual hearts content.

Beyond all shadow of doubt, performance tests, simulating or approaching actual service conditions, have their merits. Experience in the endurance, the life, or the relative merits of any manufactured product, is valuable mutually to the manufacturer and the consumer, such experience being the criterion by which goods are made and sold.

In the manufacture of any new commodity by a reputable concern this practice is very marked. No company or individual can afford to place before the public an untried product—be it rubber heels, cooking utensils, or oil.

In spite of the general trend towards exploitation of manufacturers' performance data, the proposed junking of most of the existing specifications would be serving no purpose other than to relieve manufacturers now able to meet them with difficulty, if at all.

Any two samples of the same commodity but of different manufacture, will vary in quality—and by quality is meant actual usefulness in a general sense and in particular reference to performance per dollar of value. Specifications in general lubricating oil refining practice are in some cases wholly useless as an indication of performance.

This does not necessarily condemn such specifications as are useful to the refiner. Such terms as gravity, flash and fire, and carbon residue can still give 100 per cent service in the refinery. It is true that, when competition becomes keen, specifications enhance and sharpen competition.

In close competition the tendency is to deliver, under contract, oil which will just barely meet the specification requirements and will be no better than the lowest quality acceptable under the specification. This is not a logical contention, inasmuch as a like condition could prevail with performance as the standard.

If, in place of the admittedly incompetent specifications, a way can be developed of determining the difference in quality or expected usefulness, it would unquestionably be a step forward. The gradual and conservative improvement of all existing specifications in closer proximity to actual operating conditions, would fill a long felt want.

The first radical step in this direction to gain wide publicity appears to be the "work factor machine" developed by the Navy Department, described as follows:

"It consists of a test journal 3 and $\frac{3}{16}$ inches in diameter and 6 inches long revolving in a babbitt bearing and driven by a variable speed motor, calibrated for foot-pounds lost work at different speeds. Force feed lubrication is used. The lubricating oil is fed from the reservoir to the top side of the bearing by means of a motor driven rotary pump.

"A pressure of 150 pounds per square inch is uniformly applied to the test journal by means of four calibrated springs, each provided with a scale. The temperature of the bearing is obtained from readings from two mercury glass thermometers which are set in two thermometer pockets bored in the upper part of the bearing.

"The lubricating oil is neither cooled nor heated but allowed to attain any temperature that it will during the test. The motor driving the test journal having been calibrated, the input power to the motor is obtained from calibrated volt meters and ammeters."

Following the 100-hour run, the original physical and chemical specifications are compared with the used oil and a definite mathematical relation worked out, based on unfavorable changes in the quality of the oil.

While this apparatus and procedure has valuable merits for a generalization of lubricating oil quality, it is noticeable that operating conditions such as are encountered in this machine do not parallel those encountered in an automobile engine, for example.

It has been shown that the relative lubricating quality, friction, loss or lack of lubrication in an automobile engine from a start at zero F. to full speed at running temperatures, traverse a startling range. One oil at zero F. may flow and lubricate excellently and show up relatively poor at maximum operating temperatures. Another oil may perform fairly well through the whole range and still a third may act conversely to the first. Length of service may

*Chief Technologist, Texas Pacific Coal & Oil Co., Fort Worth, Tex.

**Chief Chemist, Texas Pacific Coal & Oil Co., Fort Worth, Tex.

Standard and Spanish Monopoly Settle

CLEVELAND, July 26.—The Standard Oil Co. of New Jersey announced in New York this week it had reached a settlement July 16 with the Spanish government for the seizure of its properties in Spain by the Spanish oil monopoly.

The amount agreed on was $4,421,000, to be paid in pesetas, and includes an allowance for goodwill which the Spanish government refused to pay in the early negotiations.

The State Department aided the Standard in getting the settlement. Washington had been appealed to more than a year ago when the Spanish cabinet had refused a goodwill allowance. Washington appealed directly to Premier Primo de Rivera, who caused the negotiations to be reopened.

The premium charged by most refiners and distributors for Dubbs Cracked Gasoline over the price of their refinery straight run, is justified by the superior anti-knock quality, not its increased cost, and it is more than worth the difference

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

vary, while quality of service during a given period remains constant.

Specifications can not be devised that would entirely eliminate the necessity of performance data, but they are necessary to insure uniformity and quality of the oil. If specifications are properly drawn and intelligently used, they give reliable and valuable information about two competitive oils.

A set of specifications on an oil should be considered as a whole in comparing samples rather than individual tests. Complete specifications should be used in classifying an oil since a single test might be misleading. Specifications are often made so broad that they might include almost any oil and are consequently worthless. In some cases the reverse is true and a great many oils are excluded that would perform the service in an excellent way.

They are usually written to cover a variety of oils that would be satisfactory for a given engine, but very often the question of economy and quality makes the better oil preferable rather than one that merely passes the minimum specifications.

Performance tests are not always reliable unless a series of tests are made. This is particularly true of automobile and airplane engines since there are so many variables other than the oil being tested. Operating and mechanical conditions may outweigh the advantages of a given oil in a single test.

In the selection of the proper oil for a fleet of trucks or airplanes, the lubrication engineer must consider the economic, the mechanical, and the performance factors involved. In the solution of the problem both specifications and performance data must be used, as well as tests on the used oil after service. It would be impossible to devise tests and specifications that would actually duplicate operating conditions for any given fleet, consequently performance data are often necessary. However, a great deal of time and expense can be saved by a thorough knowledge of the specifications before making the test run.

Many tests for petroleum products have been devised and adopted by the American Society for Testing Materials and the work on new and improved methods is constantly in progress. In recent years the cooperation of the chemist and the engineer has emphasized the relative significance of various tests for lubricants and has shown the importance or need for the development of additional tests.

Very often unimportant tests are emphasized and the essential ones not considered.

In selecting a motor or airplane oil today the viscosity-temperature coefficient, the fluidity at low temperatures, oxidation and sludge formation, volatility and consumption must be considered. The modern engine is required to operate with the same filling of oil under a wide variety of temperature and pressure conditions at very high speeds, which necessitates the development of a new type of motor oil and consequently new standards and methods of testing. Motor oils that would satisfactorily lubricate the obsolete engines of several years ago will not show satisfactory results in the present day engine.

The refinery technologist was required to develop better oils and the chemist and engineer have been working to devise new specifications and methods of testing to insure the use of the proper lubricant. Although older tests might be inadequate, they are nevertheless important and give pertinent information to the lubricant engineer on which to base his judgment in selecting an oil and insuring a constantly uniform product.

In order to keep pace with progress, specifications and tests must be revised and new ones developed constantly. Advances in science and technology have been very rapid in recent years and it is very often necessary to change products and specifications frequently to keep abreast with our new knowledge. However, it would be folly to entirely discard all specifications before better ones have been devised, providing the proper significance and judgment is given to their use.

Dew Point of Gasoline-Air Mixture Defined

By Robert E. Wilson

DEW point of a motor fuel mixture is being discussed so widely today in its relation to distillation tests for quality that NATIONAL PETROLEUM NEWS *asked Robert E. Wilson, assistant to the vice president in charge of manufacturing, Standard of Indiana, who has done a great deal of work on this subject, to define and explain the term, dew point.*

THE dew point of a gasoline-air mixture is the temperature at which it just begins to separate liquid droplets on slowly cooling a completely vaporized mixture; conversely, it is the lowest temperature at which a given gasoline-air mixture can be completely vaporized if time is given to obtain equilibrium. In practice, a somewhat higher temperature is required to give complete vaporization, because the time in the manifold is not adequate to reach equilibrium conditions.

The term "dew point of gasoline" is indefinite unless it refers to a particular proportion of air with gasoline, as for example, the 12-to-1 mixture which corresponds roughly to average manifold conditions, and the 16-to-1 mixture which is about the theoretical mixture for complete combustion.

The temperature at which condensation of a completely vaporized mixture begins to occur is better described as the "initial condensation temperature," reserving the term "dew point" for the initial condensation temperature of mixtures of air and gasoline. The term "dew point" has, however, been applied to initial condensation temperatures of gasoline alone, these temperatures being much higher than the dew point of the mixtures ordinarily present in the manifold.

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Catalysis
Applied to the Conversion
of
Hydrocarbons

By Dr. Carl Krauch
Director I. G. Farbenindustrie
Aktiengesellschaft
Ludwigshafen am Rhein,
Germany

Particular Catalysts Discussed

SOME of the various catalysts that have been tried in experimental work on hydrocarbons are reported on in the accompanying installment of Dr. Krauch's article. This is part of a paper which he presented before the Second International Conference on Bituminous Coal held at Carnegie Institute of Technology in Pittsburgh last November and it is published from the proceedings of that conference by special permission of President Thomas S. Baker of the Institute. Because of its great length, the paper has been divided into three parts for publication in NATIONAL PETROLEUM NEWS. The first installment appeared on page 69 of the July 24 issue and the third and last will appear in an early issue.

PART II

I should like to say a few words about the polymerization of the lower members of the olefine and acetylene series. In the case of the higher hydrocarbons the conditions are so complicated that the splitting-up and the polymerization are hardly distinguishable. The polymerization of acetylene investigated by Berthelot and R. Meyer without catalysts and by Zelinsky with active coal, leads, as is known, to a tar about half of which consists of benzene. We have investigated a fairly large number of substances with reference to their polymerizing action upon acetylene, and ascertained that their efficiency as catalysts rests upon the fact that they favor the formation of a special form of deposition coal, which, in its turn, influences the condensation process catalytically. Comparing the appearance of the catalysts experimented with we found that on all substances of good catalytic activity graphitic carbon of a metallic lustre was deposited, whereas the substances, on contact with which none or but slight amounts of condensation products were formed, had been covered by dull soot.

The contact substances formed by passing over acetylene are also well suited for the polymerization of ethylene, propylene, isobutylene and other unsaturated hydrocarbons. The formation of the active deposition coal from these gases themselves is also possible; however, a very careful treatment, taking a long time, is required.

From the conversions which take place when simple hydrocarbons are heated in the presence of catalysts, I now pass to conversions of higher hydrocarbons. As already remarked, these reactions, in most cases are of a very complicated nature, consisting of various single processes that take place side by side or immediately following one another, such as splitting-up, polymerization and isomerization. The problem is made more difficult by the fact that in the case of the higher hydrocarbons, whose catalytic conversion is of a special practical interest, the raw materials are usually very complicated mixtures which are either difficult to separate, or inseparable by our present methods; and, moreover, they vary in composition according to their sources.

Anhydrous aluminum chloride has a special significance as a catalyst in the cracking process. It was used for the first time by Friedel and Craft in 1877 for the splitting-up of hydrocarbons, and later, applied to mineral oils by G. W. Gray and McAffee. It brings about a far-reaching conversion of the large hydrocarbon molecules, forming low boiling products which, unlike the products obtained with nearly all other catalysts, consist only of saturated hydrocarbons. The aluminum chloride can be formed advantageously from aluminum and dry hydrogen chloride in the oil to be split-up. In this connection it has been found that by previous treatment of the aluminum with certain solutions of metallic salts it is possible so to activate it that the yield of gasoline increases considerably. The fact that when working with activated aluminum the cracking temperature may be as low as from 100 to 180 degrees is worth mentioning.

Another peculiar class of catalysts is composed of certain complex compounds discovered by Meerwein. These are combinations of organic acids with the so-called Ansolvo acids, i.e., metallic salts such as zinc haloids, or inorganic neutral molecules of various kinds. The Ansolvo acids have the property of combining with the anions of the organic acids to form complex anions whereby the dissociation equilibrium is displaced in favor of hydrogen ions, and the result is a strengthening of the organic acids. According to Meerwein, surprising catalytic effects can be obtained with such compounds. Among them we found very good splitting-up catalysts for hydrocarbons. For instance, with complexes such as:

Antimony pentachloride + naphthic acid
Sodium chloride + formic acid
Aluminum chloride + phthalic acid

We obtain from high boiling oil products and tars a good yield of gasoline which is a gasoline distinguished by a high percentage of aromatic and olefine hydrocarbons and a strikingly low percentage of naphthenes. Here, too, the strong polar nature of the catalysts leads us to presume that the catalytic process takes its course via an electrostatic orientation of the hydrocarbon molecules. In spite of the complicated, frequently changing and in general, not accurately known composition of oil products and tars, it has become possible by means of catalysis to control their conversions. However perfect the cracking processes of today may be without the conscious use of catalysts, it must be admitted that catalysts are undoubtedly a very valuable aid in increasing the yield of certain desirable products and in restricting the formation of undesired products.

Besides the splitting of hydrocarbons of high molecular weight under the influence of catalysts, we have studied their synthesis from hydrocarbons of low molecular weight. Of special practical interest for us in Germany is the manufacture of lubricating oil. We are not, as you fortunately are, in the position of being able to separate lubricating oils

of the most diverse kinds in more than sufficient quantities directly from crude oil. Can inferences be drawn from the properties of hydrocarbons that are good lubricants as to the constitution of their molecules? Evidently such molecules must have the property of ranging themselves in films easily sliding against each other and of forming an adsorption layer on the surface of the bearing metal in which the molecules take a definite orientation. For the constitution of molecules that fulfil these conditions it may be presumed that rules, similar to those given by Langmuir and Harkins in their investigations respecting molecular films on the surfaces of liquids, hold good.

Anhydrous aluminum chloride has proved an excellent catalyst in the manufacture of lubricating oil, its polymerizing effect preponderating over its splitting-up effect under suitable conditions, and especially at low temperatures. If according to Allenet's process, aluminum chloride is suspended in an indifferent solvent, for instance, petroleum-ether, and gaseous olefines are introduced, they are polymerized to lubricant hydrocarbons of high molecular weight. We have introduced olefines in middle oils containing aluminium chloride. We found that not only do polymerization processes take place, but also condensations between the middle oil hydrocarbons and the olefines introduced. It is also possible that the two processes overlap. The end-result is that out of the thinly liquid middle oil highly viscous lubricating oils are obtained which, in their essential properties, are practically the same as the natural oil. Another catalyst well suited for the manufacture of lubricating oils is the borofluoride, as found by Fritz Hofmann.

Before I leave the sphere of catalytic conversion of hydrocarbons without foreign reaction participants, and turn to oxidation and hydrogenation, I should like to speak about an investigation carried out in our works which, though not lying in the catalytic but in the photochemical domain, seems to me of importance here, as it offers information respecting the stability of the bonds between the individual atoms in the hydrocarbons. We wanted to investigate the splitting-up processes which take place at the impact of particles rich in energy upon gaseous hydrocarbon molecules. It is to be assumed that these processes are similar to the changes, inaccessible to immediate observation, which the molecules undergo in the field of force of the catalytic surface. We did not avail ourselves here of the method of electron impacts, as, under certain circumstances, the charge of the electrons might influence the splitting-up process; moreover, the investigation of the fragments is made difficult in consequence of the fact that the gas or the vapor to be bombarded with electrons must be highly diluted.

In the Oil Industry

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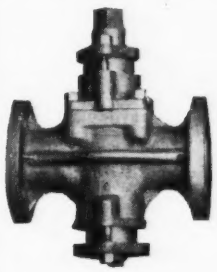

Plate 3
Double Guard Type

Here are two of the Northern Valves which are most useful in the Oil Industry. The Double Guard type — (Plate 3) — is made regularly in Cast Steel—and is for Hot Oil. The Steam Jacketed type (Plate 4)—is excellent where a "Hot" Valve is needed — such as in Asphalt and Tar lines.

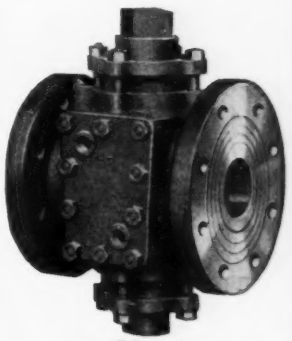

Plate 4
Steam Jacketed Type

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—asked the executive of a gasoline company on the west coast recently of a Tulsa oil man. His answer was . . .

> "If you were to wire me for Mid-Continent gasoline prices today, I would phone a member of the OILGRAM staff, and my reply to you would be the *gist of what he told me.* The OILGRAM staff is in direct and close contact with the markets almost every hour of the business day. *They know their business.*"

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The service costs only $25 a quarter, or $75 a year, payable in advance. Approximately 30 cents a day—less than the cost of one wire or one phone call.

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Distillation—Fractionation

Forty-five articles have been published since May, 1928 in National Petroleum News on the subject of increasing yield of products—improving their quality—reducing manufacturing costs — equipment design—

This averages a little more than one article per issue on this one phase of refinery operation. For your file reference we list them below:

1929

Modern lube oil manufacture
July 10, p. 73; July 3, p. 71
Lube making from Ranger crude
June 26, p. 80; June 19, p. 78; June 5, p. 73
Refinery makes over old equipment
June 12, p. 64
Farthest west refinery in Texas
June 12, p. 74
Distillation, light cracking and desalting West Texas crude
May 29, p. 65
Vertical tube still developes 70% efficiency
April 24, p. 75
Improving fractionation in cracking systems
March 13, p. 78
1928 refinery progress
March 6, p. 69
Still is most important of absorption plant
March 6, p. 72

1928

Pipe still application to vacuum distillation
Dec. 5, p. 83
Single pass pipe still handles 2500 barrels crude
Dec. 5, p. 86
Flash vaporization of petroleum to produce lubes
Dec. 5, p. 93
Motor oil specified on resistance to distillation
Oct. 3, p. 90
Better fractionating equipment saves heat
Sept. 26, p. 91
How a refinery cut costs in half
Sept. 19, p. 22
Gravity, volume corrections for temperature
Sept. 5, p. 110; Sept. 19, p. 74
Gas and gasoline analysis in plant control
Sept. 5, p. 79
Narrow distillation range oils best for absorption
Aug. 8, p. 54
Distillation test in determining vapor pressure
Aug. 1, p. 58
Light fractions from stabilizer
July 25, p. 21
How important oil tests are applied
Aug. 22, p. 81; Aug. 15, p. 73; Aug. 1, p. 80; July 25, p. 29; July 18, p. 26; July 11, p. 60
Improving efficiency of shell stills
July 11, p. 69
Gasoline recovery from gases, Bayer charcoal process
July 4, p. 67; June 27, p. 97
Zilwaukee refinery adapted to small field
June 20, p. 23
Vertical steam still for fat oil distillation
June 6, p. 37
Saves $80,000 yearly with auxiliaries
June 6, p. 32
Fractionation theory and practice
May 23, p. 102
Careful refining and selling build trade
May 23, p. 56
Distillation process control by laboratory
May 16, p. 57
Cutting costs in steam raising
May 16, p. 49; May 9, p. 49; May 2, p. 17
New types of distilling equipment
May 9, p. 76
Halves fuel costs with old shell still
May 2, p. 81
Pipe still economy in making Penna. lubes
May 2, p. 56

The above list of articles is for your convenience in locating them in your file.
If you wish extra back copies, we shall be glad to supply them at 25c a copy. However, our stock of back numbers is limited and we are entirely out of some issues.
On numbers that are exhausted, we can have photostat copies made of the pages you wish at a cost of 40c per page, negative proof.
Libraries in the larger cities generally keep back files of National Petroleum News complete.

National Petroleum News
Main Office: 1213 West Third St.
Cleveland, Ohio

Nor did we use silent discharges, for the processes here are so complicated that it is scarcely possible to identify individual processes and to interpret them. The method developed by us in 1924 in connection with the research of your countryman, R. W. Wood, and the German physicists, J. Frank and G. Cario, on the so-called resonance radiation, proved to be satisfactory.

The phenomenon of resonance radiation consists in this, that the atoms of a metallic vapor, say mercury vapor, when raised to the so-called excited states, i.e., states rich in energy, by irradiation with light of a definite wave length begin to radiate in the absence of foreign gases. The presence of foreign gases prevents this resonance radiation of metallic vapors, the excited metal atoms losing their energy upon colliding with the molecules of the foreign gas, the latter becoming chemically changed. Thus Frank and Cario could prove that, in hydrogen at very low pressure (some hundredth millimeter mercury), such excited Hg-atoms produce H-atoms. In our research laboratory at Oppau, it was ascertained that such chemical changes take place even at atmospheric or higher pressures. It was further ascertained that the primarily formed atoms or radicals with other additional gases yield most diverse conversions which are often difficult to bring about in other ways. This application of the optically sensitized light-reaction makes it possible to obtain many kinds of products from simple gases. Experiments with pentane showed that the splitting-up of the molecules of this hydrocarbon takes place in two directions. On the one hand, H-atoms are separated from the molecules, on the other hand C — C linkages are disrupted. The resulting radicals combine to form hydrocarbons with fairly long chains, among which hexane, nomane and decane could be identified. This method was developed by us and, later on, independently in your country by H. S. Taylor, A. L. Marshall, and others, in whose hands it led to interesting results. In this method the energy of each colliding particle is accurately known from spectroscopic measurements—for Hg-atoms it amounts to 113 cal. per mol.; it affords conclusions concerning the stability of the molecular linkages and elucidates the primary processes in catalytic conversions: In the case of pentane both C = C and C = H linkages are disrupted by activated Hg-atoms and the result is in conformity with the value for the previously mentioned splitting-up energy of these linkages in aliphatic hydrocarbons, as calculated by means of Fajan's cycles.

Among the catalytic conversions of hydrocarbons in the presence of oxygen and steam, the conversion of methane is again of special interest, since large quantities are obtainable in coke furnace gas as well as in natural gas. Its suitability for the production of hydrogen makes it one of the most important basic materials of the chemical industry in this age of the ammonia and the hydrogenation of crude oil and coal.

Apart from direct splitting-up of methane into its elements, hydrogen is obtainable from methane through oxidation with oxygen or with steam:
(1) $CH_4 + \frac{1}{2}O_2 = CO + 2H_2 + 7$ Cal.
(2) $CH_4 + H_2O = CO + 3H_2 - 51$ Cal.
Through oxidation with steam it is possible to obtain from one volume CH_4, 3 volumes H_2 and, if the resulting CO is converted with steam to CO_2 and H_2, 4 volumes of H_2 can be gained; that is, twice as much as by direct splitting-up. The heat required for the reaction is, however, considerably greater, while the temperature of the reaction is not considerably lower than in the case of the direct splitting. We succeeded in finding catalysts which enabled us to carry out the reaction at relatively low temperatures. We have worked this process both in the discontinuous mode, in which the reaction vessel was heated periodically and the mixture of methane and steam passed through it, and in the continuous mode, heating the vessel from the outside.

In the case of oxidation with oxygen or air it is possible to get from one volume CH_4, 2 volumes H_2 or, after conversion of CO with steam, 3 volumes H_2. Technically, this reaction is easier to carry through than the other two mentioned, because it has a positive heat of reaction. Also here, the use of catalysts lowers the reaction temperature.

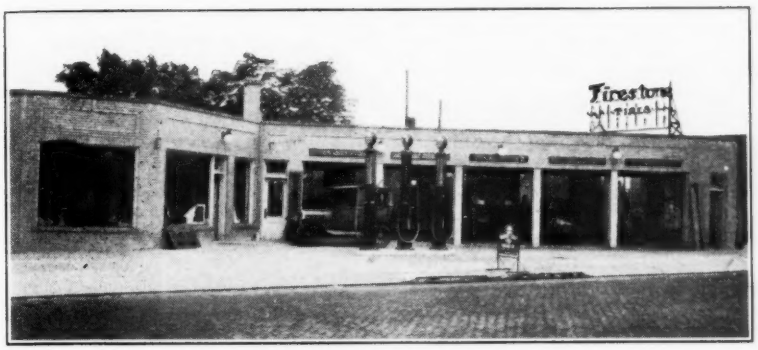
The various processes for the production of hydrogen from methane may with advantage be combined; for instance, methane may be converted partly with oxygen and partly with steam, thus covering the energy requirements of the steam reaction by the surplus of heat of the oxygen-reaction and making it possible to work continuously.

The thermic splitting of methane may be so controlled by special precautionary measures that no complete decomposition into the elements occurs, but that acetylene results as a conversion product of a primarily formed radical. Similarly acetylene may be obtained as a product of the partial combustion of methane with oxygen.

(To be continued)

A provincial charter for a new stock exchange to be called the Consolidated Mining and Oil Exchange of Montreal has been obtained by Montreal brokers and investment firms. The exchange will specialize in Canadian stocks.

Gasoline Is Best Part of Sales For This Tire Dealer



One-stop service station of Bosch-Camp, Inc., Barberton, O., a suburb of Akron. This station is on a triangular lot on two main state highways. A street car line for some reason detours around the rear of the station thereby facilitating entrance to and departure from the station. Four of the station's seven gasoline pumps are out of the picture at the extreme right. The station was designed by Frank C. Houpt, architect with Firestone Tire & Rubber Co.

BARBERTON, O.

"GASOLINE and oil is the best part of this business," said F. W. Camp, a member of Bosch-Camp, Inc., Barberton tire dealers, which May 18 opened a new super-service station on Highway No. 36 near the heart of this industrial suburb of Akron.

"We are averaging 600 gallons a day at this station which has been open only a short time."

The Bosch-Camp, Inc., is a Firestone dealer but it is not financed by the Firestone Tire & Rubber Co., Mr. Camp said. The company is independent of the tire manufacturer.

The station, which is strung along a long narrow lot with Highway 36 along the front and a street car line along the rear, contains a salesroom, rest room, tire room, battery room, and five stalls. One of the stalls is used for car washing, One for oil changing, one for chassis lubrication and two for tire and battery service.

There is a pit in the oil change stall designed so that at some later time a brake testing machine may be installed. In the chassis lubrication stall there is a lift.

Bosch-Camp believes in giving motorists what they wish in the way of gasoline and oil. It sells six grades of gasoline through seven pumps and has five brands of oil, four of them national brands. Its gasolines are Sunoco, Red Crown, Sohio Ethyl, and Servis high test, low test and Ethyl. The Servis brand is bought at tank wagon from the Dicken Oil Co., an Akron jobber.

The motor oils are Quaker State medium and heavy, Mobiloil A and BB, Pennzoil medium and heavy, Gulf Supreme medium and heavy, Sohio medium and heavy, and Reliance medium, heavy and extra heavy. Reliance is a local competitive 25-cent brand. The other brands sell at 30 and 35 cents a quart.

The Sohio and Gulf brands are in 65-gallon drums but the other brands are in tanks of uniform size, which are supplied Bosch-Camp by the oil companies under Bosch-Camp specifications.

The company has five 100-gallon gasoline tanks and two 500-gallon tanks underground which it owns. The seven gasoline pumps are of the same make and model but furnished by the oil companies to Bosch-Camp specifications. All are 10-gallon visibles.

The station owns its own vulcanizing and tire changing equipment, the battery repair and charging equipment, its lubrication equipment including the lifts. Its only leased equipment are the oil tanks with pumps, and gasoline pumps.

Two brands of batteries are sold —Cooper and the new Firestone.

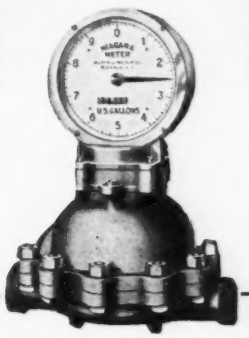
The tire sales fall behind the oil and gasoline business at this station, it was admitted. It was explained that because of the tire industry in Akron and its suburbs that "nearly everybody has a drag" and could buy tires at big discounts.

American Meter Co. announces the appointment July 1 of John C. Diehl as chief engineer. Mr. Diehl has been engineer with the Metric Metal Works division of the company at Erie since 1919, specializing in large volume, high pressure measurement of gas and liquids. He is the author of the revised edition of the Natural Gas Handbook of 1927 and has assisted in the preparation of other similar books.

ACCURACY

Regardless of how much or how little gasoline or oil passes through a Niagara meter, it accurately registers and records, preventing loss, theft or favoritism.

And a Niagara repays its cost by enabling you to sell and profit on the gasoline and oil that would be unaccounted for without a meter! Send today for our newest catalogue.



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2889 Main St., Buffalo, N. Y.

The EDELEANU Process
for
Refining with Liquid SO_2
Yielding
Highest grades of
KEROSENE
TRANSFORMER OIL
TURBINE OILS
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WHITE OILS
MEDICINAL OILS
Non-Detonating Gasoline

AGEFCI
11 W. 42nd St.
New York N. Y.

Light Weight Folio

Folio and Inner Case Only

$10.10

No. 369—A compact outfit. Folio made from heavy 5-oz. smooth black cowhide, with 5½-inch over-all expansion and three inner pockets. Inner case contains six 4-oz. bottles, displayed on a background of red velvet. Each bottle is partitioned separately. Case also contains five grease jars.

Less 10% for Cash

Other styles in our FREE Catalog

L-U-C-E

Builders of Sales Luggage

614 Delaware, KANSAS CITY, MO.

Can You Say *This?*

My drums are *spick and span.*

All BENETCO drums are like that. Of course, this is very unusual praise, but it is said of every Wilson & Bennett container without hesitation. BENETCO products always carry that "spick and span" appearance.

This is why you will find manufacturers and shippers of all products using them. Under the BENETCO label you are assured absolute protection plus an immaculate finish which adds to the cleanliness and purity of the contents.

WILSON & BENNETT MFG. CO.

"Steel Container Specialists"

CHICAGO and NEW YORK

Sales offices in Principal Cities

ON THE LAZY BENCH

National Petroleum News

Customer—Ouch! This towel is scalding hot.

Barber—Sorry, sir, I couldn't hold it any longer.

—Booster

* * *

Hubby Wrong Again

Hubby: "It seems to me, dear, that there is something wrong with this soup."

Wifie: "Wrong again, dear; the cook book says it is perfectly delicious."

—Isotopics

* * *

"Hey, Joe, what time is it?"

"How'd you know my name was Joe?"

"Oh, I just guessed it."

"Well, guess the time then."

—Field Flashes

* * *

"I'm going to call my garage 'The Half Way Inn.'"

"Why."

"Because that's the way my wife parks the car."

—Union Oil Bulletin

* * *

Teacher (in grammar class): "Willie, please tell me what it is, when I say, 'I love, you love, he loves.'"

Willie: "That's one of them triangles where somebody gets shot."

—Skelly News

* * *

A cowpuncher ordered a steak at a restaurant. The waiter brought it in —rare—very rare. The puncher looked at it and demanded that it be returned to the kitchen and cooked. "'Tis cooked," snapped the waiter. "Cooked—hell," said our friend the puncher. "I've seen cows hurt worse than that get well."

—Southwestern Bulletin

* * *

Mike: "You didn't know who I was at the game yesterday, did you?"

Ike: "No, who were you?"

—The Unloading Rack

* * *

"Has you made all arrangements for your marriage, Mandy?"

"Well, not quite all, Dinah. I's got to buy a trooso, an' rent a house an' get my husband a job, an' buy him a good suit o' close an' get some regular washin' work to do. An' when them's done ah kin name the happy day."

—Pure Oil News

* * *

"Hey Rastus, lemme present my wife to you."

"Naw suh, boy, I'se got one of my own."

—Skelly News

First Englishman: "Charlie, did you hear that joke about the Egyptian guide who showed tourists two skulls of Cleopatra—one as a girl and one as a woman?"

Second Englishman: "No, let's hear it."

—Barnsdall

* * *

How to Win at Bridge!

1. Bid high, your partner may have a good hand.
2. When you have a poor hand, signal immediately by saying, "Who the heck dealt this mess?"
3. Claim all the honors—you might get away with it.
4. If you get a poor partner, keep score yourself; you've got to have some advantage.
5. Lead from your own hand, or dummy, as convenient.

—The Booster

* * *

A Litany

From bobbed haired bandits armed with gats
And sporting gaily colored hats;
From folks who catalogue their ills,
Their plasters, pills and doctor bills;
From nursing infants who rehearse
Their views of life and love in verse;
From dancing daddies who delight
In boutonnieres and waistcoats white;
From "stylish stouts" in knickers pressed;
From grafters with their wealth oppressed;
From frisky plays and risky books,
And politicians who are crooks,
From flappers with their frills and fads,
From picnic fans, misleading ads,
And all the modern fake and fuss,
Kind Providence deliver us!

—Magnolia Oil News

* * *

George: "What made you oversleep this morning?"

Frank: "There are eight of us in the house, but the alarm was only set for seven."

—Heil Quality News

* * *

Teacher: "Now, James, name America's greatest general."

James (the son of a broker): "General Motors."

—Isotopics

* * *

Ex-Gob: "It would have been great had we known in time that all that was needed to win the World War was the right brand of cigarettes."

—The Unloading Rack

Help the Retailer Before Financial Ills Beset Him, Credit Men's Program

J. A. Bond

CLEVELAND, July 26

THE Business Service program of the National Association of Credit Men, designed to help the retailer or distributor in all lines to operate on a sounder financial basis, is being directed largely by an oil man, J. M. Rust, Los Angeles, assistant treasurer of the Union Oil Co. of California.

Mr. Rust is chairman of the National Executive Committee on Business Service of the N. A. C. M. Associated with him on that committee is another oil man, J. A. Bond, San Francisco, Standard Oil Co. of California.

This program, it is believed, will greatly contribute to prevention of waste and turnover in customers among retail firms and the resultant losses in profits to those still engaged in business, due to liquidation and bankruptcy sales of stocks thrown on the market to the detriment of going concerns.

The business service program was inaugurated a few years ago. As worked out to date and presented in a report by Mr. Rust's committee at the meeting June 24-28 of the National Association of Credit Men has two principal features.

First is the remedial service, which centers in an investigation service, under the direction of local chapters of the N.A.C.M., on slow debtors, as revealed through the ledger interchange records.

According to Mr. Rust, this plan was tried out by local credit associations in both San Francisco and Los Angeles, and the San Francisco plan of operation was recommended to other local associations throughout the country. "The credit men of the manufacturers and wholesalers are quite generally formed into trade group organizations in the local credit associations and have an interest in this class of debtors," said Mr. Rust. in his report. "These groups meet frequently in weekly luncheons, or semi-monthly luncheons, and discuss their distributor-customers, principally their paying practice, which clears through the local association ledger interchange bureau records."

Under the remedial service plan, in the case of a slow debtor in which enough members of the local credit association are interested, the local secretary sends out a trained man to investigate the reasons for the past due condition of the debtor. This investigator presents a letter introducing him as coming from the credit association. This letter goes on to say that attention of the credit association has been drawn to the conditions of this particular account and asks that the investigator be given full confidence of the debtor and access to his accounts.

"Please understand that Mr. Blank is not calling upon you for the collection of any account, but for the sole purpose of determining your condition and offering assistance," reads the letter.

"You are the distributor of the merchandise of your creditors. They are interested in your success and desire to assist you in every possible way, and, in turn, will appreciate your cooperation and assistance."

The results of the investigation are formulated into a written report, which may include recommendations of the investigator to the credit men as to how the debtor's business conditions may be improved.

"The experience of both the Los Angeles and San Francisco associations was that only in rare instances did the investigators meet with refusals on the part of the debtor to cooperate," said Mr. Rust in his report. "In most cases debtors greeted the investigator with evidence of gratitude and expressed appreciation for the service rendered.

"Such investigations result in:

"1. Informing the creditors fully as to the true condition.

"2. Opening a way to cooperate with the distributor or retailer in correcting any weakness in his merchandising methods.

J. M. Rust

"3. Cementing the friendship of the distributor with his suppliers of merchandise.

"4. Improving the cooperation between the wholesalers along lines on which cooperative effort is most beneficial to themselves.

"5. Increasing the importance of the ledger interchange department of the local credit association.

"6. In some cases revealing that the debtor is in a hopeless condition, and thereby bringing about a liquidation earlier than is usually the case, to the mutual benefit of both creditors and debtor.

"7. The service thus rendered by the local association enhances the importance and value of the local association work to its members, and is instrumental in forming other trade groups and increasing membership of the local credit association.

"The expense of such service is borne by the creditors, pro rata, or upon such mutual arrangement as may be satisfactory. The cost to the creditors in the local associations employing the method has averaged not to exceed $2.50 per creditor.

"When an investigation is decided upon, the secretary of the local association notifies all creditors of record in the interchange bureau that an investigation is to be made, and asks them to lend their moral and financial

Youngstown
"KEENE TANKS MADE"
STANDARDIZED
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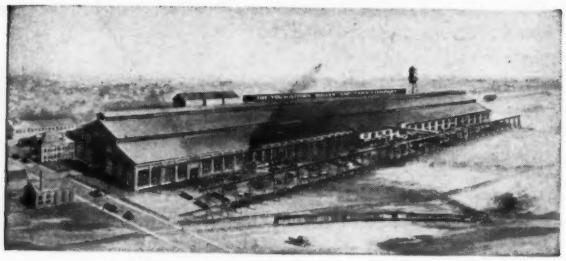

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—"FIFTEEN"—
IT TELLS YOU ALL YOU WANT TO KNOW ABOUT STANDARDIZED STEEL STORAGE TANKS.

The Youngstown Boiler & Tank Company
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THEY "PASS UP" THE CROWDED STATION!

With stations on every likely corner business won't wait on slow service. Sell your customers coupon books—keep the attendant at the pump with less change making, speed up the rush hour—and get a bigger percentage of steady, patient, regular customers. Write us for full information and samples of Allison Coupon Books.

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INDIANAPOLIS, INDIANA

support. All are furnished with reports of the investigation and with questionnaires on which they indicate their opinion of the steps to be taken to rehabilitate the debtor. If an appreciable number indicate their desire for a meeting, one is called, to formulate plans for constructive business building on the debtor in question."

The plan for Preventive Measures, the second feature of the business service program of the National Association of Credit Men, has been formulated by the National Executive Committee, but not yet put into practical operation. Following is the outline as presented by Mr. Rust:

"The remedial measures first referred to, where the debtor is evidently in an involved condition, afford the basis upon which the approach is made to such debtor. However, with the merchants who are not in such past due condition in the matter of paying record, another means or basis of approach must be found, and this, the committee feels, can be more easily done through suggesting ways and means to larger profits, thereby inducing the merchant to make a *voluntary* request for help or suggestion.

"The plans of the committee now being worked out will center in, and also be worked through, the local credit association and local business service committee, along the following lines:

"A letter will be issued with the imprint of the local association which installs a business service committee to handle its work. This letter lists ten suggestive problems of general business management of widespread character, for which separate answers will be prepared, and suggests to the recipient that the answers may be of interest to him and will be sent gratis on request, thus opening the way for business service contact with such debtor and indicating the line along which such debtor desires help or suggestion."

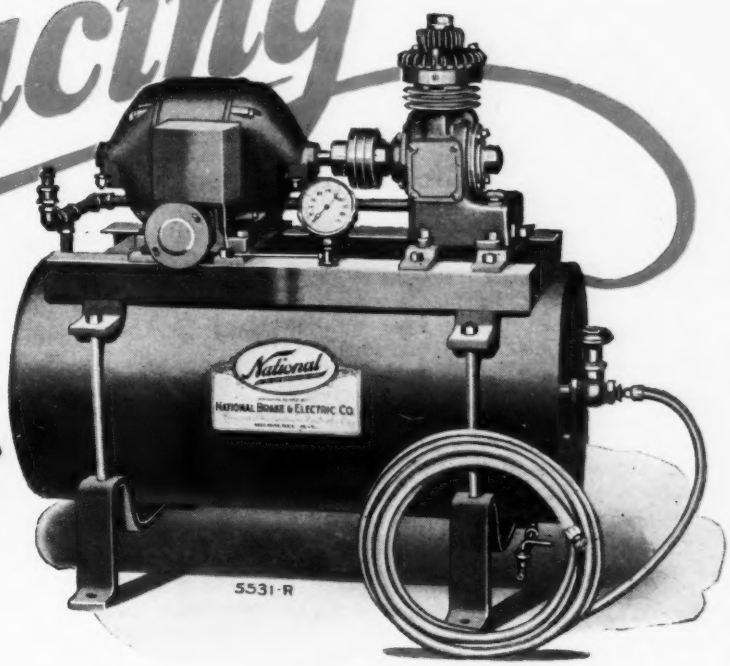
Following is a copy of the letter:

Your Business Problems Answered

To make business more successful for the resellers and in turn for the wholesalers and the manufacturers, the XYZ Association of Credit Men have appointed a Committee on Business Service, through which the wholesalers and manufacturers will undertake to find answers to the problems of the resellers handling their products.

We realize, of course, that many resellers now in business lack the personal qualifications necessary for success, no matter how much help they might be given. However, we also appreciate that a large number, who should make larger profits, are not equipped to meet all of the problems that present themselves in present day merchandising. We believe the wide awake successful merchants de-

Introducing the better Air Compressor



Built by one of the oldest and foremost builders of air controlled equipment in the world . . . .

NATIONAL BRAKE & ELECTRIC CO.
Division of Westinghouse Air Brake Co.
Milwaukee, Wisconsin

National
SLEEVE VALVE TYPE
AIR COMPRESSORS

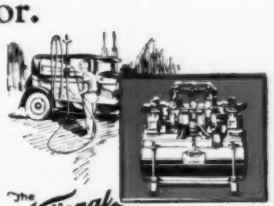
Built in many combinations with single and two cylinder compressors (air or water cooled) from 2½ to 22¾ cu. ft. sizes.

Write for Catalog No. B821.

The New Sleeve Valve Principle of Design

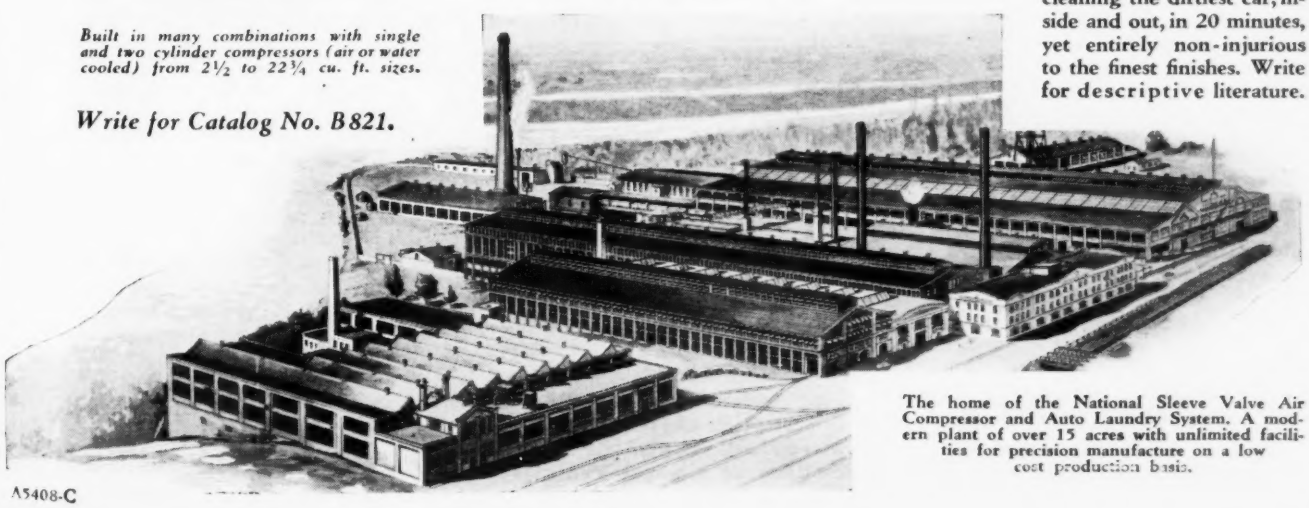
ALL the unlimited resources, all the skill and engineering experience of the Westinghouse-National organization have combined to make *this* the better compressor.

1. *Greater Compactness* achieved through elimination of belts, gears or idlers.
2. *Greater Speed.* The extremely small lift of the *mechanically* operated sleeve valve (less than $\frac{1}{64}$ inch), makes possible operation at electric motor speed.
3. *Greater Efficiency.* The National, because of its exclusive Sleeve Valve design, delivers more air than *any* compressor of equal displacement.



The National AUTO LAUNDRY SYSTEM

Another National achievement. Carburetor-like mixing produces the first truly uniform, atomized spray of air-and-water capable of cleaning the dirtiest car, inside and out, in 20 minutes, yet entirely non-injurious to the finest finishes. Write for descriptive literature.



The home of the National Sleeve Valve Air Compressor and Auto Laundry System. A modern plant of over 15 acres with unlimited facilities for precision manufacture on a low cost production basis.

A5408-C

sire to become more successful and will seek and welcome all the constructive information possible as to ways and means of increasing their profits. It is to these latter ambitious merchants that this circular is addressed.

This business of helping our dealer customers is not an easy job, but it is constructive and makes friends, stabilizes trade, saves money on bad debt losses, builds good will and reduces competition for the reseller from sales on "CLOSED OUT" and "BANKRUPT" stocks. In other words, it means success for the reseller through cooperation with the wholesaler and the manufacturer. Therefore, we cordially welcome your inquiries on your problems and will seek to answer them without cost or obligation to you, for the mutual benefit of better business and larger profits.

Below is a list of questions asked by some retailers. Would you not find the answers helpful to you?

1. How Should I Figure Profits?
2. What Insurance Should I Carry and How Much?
3. What Should Be the Turnover in My Line and How Can I Determine the Profitable Lines?
4. What Per Cent of My Expenses Should Go for Rent, Wages, Advertising, Insurance, etc.?
5. How Can I Collect My Past Due Accounts?
6. What Are the Average Costs of Doing Business in My Line?
7. What Simple System of Bookkeeping Would You Suggest for My Line?
8. What Principles Should Be Followed in Installment Selling?
9. What Should Be the Gross Profit in My Line?
10. How Does Budgeting Act as a Check on Expenses?

There are many other problems which may be troubling you. If interested and you desire information, kindly indicate by number on the enclosed card or write the problems to which you are seeking a solution, and send to Mr. ABC, Secretary of the XYZ Association of Credit Men for the attention of the Business Service Committee.

"Should the request for help on business problems become too numerous, then it is suggested that the local association, through its business service committee or trade group, follow the plan of holding 'Merchants' Institutes,' as suggested by the Chamber of Commerce of the United States and work with the local chamber of commerce in their city in holding such institutes. These institutes may cover other business problems than those particularly coming under the purview of the credit men, but the other departments of the wholesalers or manufacturers should cooperate in the handling of subjects pertaining to their respective departments.

"In view of the records of the commercial agencies showing the enormous turnover in business enterprise, as evidenced in the average life of a business as only seven years, it is important that the national association recognize, and find some means of reducing, this great waste of merchandising, and cut the high cost of distribution necessarily incident thereto."

Atlanta Motorists Charge Oil To Grocery Accounts

ATLANTA

GETTING motor oil at a neighborhood filling station and having it charged to your account at the neighborhood grocery store, is a new sales idea of the Holcomb Oil Co. of Atlanta. By this means the oil man gets cash for his merchandise and permits the groceryman to share in the profits.

The machinery effecting this cooperative merchandising system between the oil man and the grocer is simple. The oil company (headed by O. V. Holcomb) procured some small display stands, 12 x 14 inches, to stand on top of a merchant's show case. The stand is covered with advertising matter but its main object is to support a full quart bottle of oil.

The merchant does not have any motor oil in stock. The single quart in the display stand on his show case is the only Holcomb motor oil in the store. But the merchant has coupons for oil. Each coupon is good for eight quarts of Holcomb oil and sells for $1.50 (75 cents a gallon for the oil). It may be obtained by the purchaser anywhere Holcomb oil is sold and he can get it all at once or a quart at a time—as he pleases.

When a merchant sells a coupon he has moved two gallons of oil for Holcomb Oil Co., and has earned 40 cents for himself; 20 cents a gallon. Mr. Holcomb has not confined this merchandising idea to grocery stores. He has extended it to drug stores, cigar stores and department stores as well. It is estimated that 50,000 Atlanta people see one of Mr. Holcomb's quart sample bottles of oil every month.

Mr. Holcomb declares that sales through the medium of ten chain stores in Atlanta increased his business more than 2500 gallons of motor oil a month. One chain drug store in town selling oil coupons for Holcomb has more than 30 outlets and each outlet is selling upwards of five coupons a week. That means 1200 to 1500 gallons a month for Mr. Holcomb and approximately $250 a month for the drug company.

Mr. Holcomb considers the advertising value of the little display on the counter of leading retail stores, by no means least of the advantages of the new idea. The chief service rendered by the retail merchants is that of exhibiting an actual sample of Holcomb oil and telling any inquiring customer about the price and quality of the product. But if the merchant wishes to improve his services in order to improve his own sales, he as at liberty to extend credit to his customers.

In this way the motorist buys his oil at a grocery store or a drug store where he is at liberty to examine a sample and have the purchase charged to his account. All he takes away from the store is a coupon for eight quarts, but they will be honored with oil and service at any filling station that is an authorized dealer in Holcomb oil.

By this system the community drug store or grocery, fully equipped to extend credits safely in its community, may charge oil to its customers and take a profit on it. The oil man gets the additional distribution, the unusual advertising and the trade stimulant that is incidental to credit extension, without worrying with retail credits.

Holcomb Oil Co. handles oil in bottles exclusively. It maintains bottling plants at several points in Georgia and the company's best distributors are soft drink manufacturers. They carry bottled oil and bottled drinks to country stores and wayside pop stands on the same bottle trucks. A complete account of Mr. Holcomb's wide distribution of oil in bottles appeared in NATIONAL PETROLEUM NEWS of Feb. 6, 1929, on page 91.

Leod Becker Heads Burner Company

ST. LOUIS, July 26.—Leod D. Becker, owner and publisher of Fuel Oil Journal, New York, has disposed of his publishing interests and has been elected president of Electrol, Inc., St. Louis, one of the large oil burner manufacturers in the country.

Headquarters of Electrol, Inc., will be moved from St. Louis to 227 E. 45th St., New York, immediately.

W. T. Koken, who has been president, becomes chairman of the board. M. E. Simpson, formerly general manager of Electrol Distributing Corp., becomes vice president in charge of sales.

Other changes in the Electrol company include Han A. Kunitz, who becomes chief of research engineering. Lewis L. Scott and Lionel L. Jacobs continue as vice presidents.

To Publish Natural Gasoline Research Program

TULSA, July 24

AUTHORIZATION for the preparation and publication of a book containing the results of the three-year research program conducted at the University of Michigan on the volatility of motor fuels has been made by the board of directors of the Natural Gasoline Association of America. The book will be written by Dr. George G. Brown under whose direction the research work was conducted.

The decision of the board to authorize the publication of the data in book in conjunction with the University of Michigan was made at a meeting in Tulsa July 16, after the educational committee had recommended the plan. The book probably will be completed and off the press by the first of the year.

The association retained Doctor Brown three years ago to conduct a thorough research into the volatility of motor fuels, with special emphasis placed on the volatility as related to the use of natural gasoline. The association also established fellowships at the university in order that the work could be carried on completely.

The educational committee of which D. E. Buchanan, of Chestnut & Smith Corp. is chairman, recommended that Doctor Brown be retained for part time work for another year, or until July, 1930. At the same time the committee recommended that sufficient fellowships be maintained to complete the work at the University. The recommendations were approved by the directors.

The directors appointed a publicity committee composed of Emby Kaye, Skelly Oil Co., chairman, and A. F. Wood of the Chestnut & Smith Corp., Tulsa; and S. S. Smith, Shell Petroleum Corp. The committee will work in cooperation with the trade papers in expediting the preparation and printing of technical papers relating to the natural gasoline industry.

The complete membership of new committees of the Natural Gasoline Association is as follows:

Personnel of Natural Gasoline Committees

Executive Committee

E. R. Lederer, Chm., Texas Pacific Coal & Oil Co., Fort Worth.
A. J. Schlosser, Vice-Ch., Barnsdall Oil Co., Tulsa.
H. B. Bernard, Sinclair Oil & Gas Co., Tulsa.
D. E. Buchanan, Chestnut & Smith Corp., Tulsa.
Emby Kaye, Skelly Oil Co., Tulsa.
E. L. Peck, Empire Oil & Ref. Co., Bartlesville.
F. E. Rice, Phillips Petroleum Co., Bartlesville.
S. S. Smith, Shell Petroleum Corp., Tulsa.

Finance Committee

Emby Kaye, Ch., Skelly Oil Co., Tulsa.
E. L. Peck, Vice-Ch., Empire Oil & Ref. Co., Bartlesville.
H. B. Bernard, Sinclair Oil & Gas Co., Tulsa.
F. E. Rice, Phillips Petroleum Co., Bartlesville.
S. S. Smith, Shell Petroleum Corp., Tulsa.

Educational Committee

D. E. Buchanan, Ch., Chestnut & Smith Corp., Tulsa.
G. G. Oberfell, Vice-Ch., Phillips Petroleum Co., Bartlesville.
H. B. Bernard, Sinclair Oil & Gas Co., Tulsa.
E. R. Filley, The Texas Co., Tulsa.
Emby Kaye, Skelly Oil Co., Tulsa.
W. A. Melton, Shaffer Oil & Ref. Co., Tulsa.
W. W. Robinson, Jr., The Texas Co., Long Beach, Cal.
S. S. Smith, Shell Petroleum Corp., Tulsa.
E. L. Peck, Empire Gasoline Co., Bartlesville.

Gas Contract Committee

T. R. Goebel, Ch., Skelly Oil Co., Tulsa.
J. H. Boyle, Vice-Ch., Chestnut & Smith Corp., Tulsa.
J. W. Cowles, Shell Petroleum Corp., Tulsa.
R. B. Daughtery, Barnsdall Oil Co., Tulsa.
S. J. Fraser, Prairie Oil & Gas Co., Independence.
M. T. Kirk, Phillips Petroleum Co., Bartlesville.
Harry A. Mentzell, Amerada Petroleum Corp., Tulsa.
R. H. McCalley, Forrest E. Gilmore Co., Tulsa.
E. L. Peck, Empire Gasoline Co., Bartlesville.
C. L. Pitcher, The Texas Co., Tulsa.
A. T. Scherer, Sinclair Oil & Gas Co., Tulsa.
D. C. Williams, Marland Oil Co., Ponca City.
J. R. Freeman, Carter Oil Co., Tulsa.

Gas Testing Committee

Geo. P. Bunn, Ch., Phillips Petroleum Co., Bartlesville.
Norris Plank, Vice-Ch., Shell Petroleum Corp., Tulsa.
C. L. Baker, The Texas Co., Tulsa.
J. E. Dale, Barnsdall Oil Co., Tulsa.
H. T. Griffin, Jr., The Palmer Corp., Shreveport.
D. B. Hiatt, Texas Pacific Coal & Oil Co., Fort Worth.
J. E. Jones, Marland Oil Co., Ponca City.
E. C. LeFevre, Empire Oil & Ref. Co., Bartlesville.
P. S. Magruder, General Petroleum Corp., Los Angeles.
L. G. Rheinberger, Sinclair Oil & Gas Co., Tulsa.
E. F. Schmidt, Lone Star Gas Co., Dallas.
E. H. Schoenfeldt, Prairie Oil & Gas Co., Independence.
G. L. Shaner, Carter Oil Co., Tulsa.
J. M. Yaiden, Skelly Oil Co., Tulsa.

Legal Committee

R. H. Hudson, Ch., Phillips Petroleum Co., Bartlesville.
W. M. Z. German, Vice-Ch., Skelly Oil Co., Tulsa.
Thos. Casey, Barnsdall Oil Co., Tulsa.
Karl F. Griffith, Lone Star Gas Co., Dallas.
John Hancock, Texas Pacific Coal & Oil Co., Fort Worth.
Warren T. Spies, Empire Oil & Refining Co., Bartlesville.

Membership Committee

H. B. Bernard, Ch., Sinclair Oil & Gas Co., Tulsa.
A. J. Schlosser, Vic-Ch., Barnsdall Oil Co., Tulsa.
D. E. Buchanan, Chestnut & Smith Corp., Tulsa.
F. L. Chase, Lone Star Gas Co., Dallas.
M. E. Foster, Phillips Petroleum Co., Bartlesville.
E. L. Peck, Empire Gasoline Co., Bartlesville.
Geo. L. Ratcliffe, General Petroleum Corp., Los Angeles.
S. S. Smith, Shell Petroleum Corp., Tulsa.

Meters & Regulators Committee

Don A. Sillers, Ch., Lone Star Gas Co., Dallas.
Geo. Griner, Vice-Ch., Phillips Petroleum Co., Bartlesville.
P. M. Childers, Marland Refining Co., Ponca City.
J. E. Dale, Barnsdall Oil Co., Tulsa.
J. J. Delaney, General Petroleum Corp., Los Angeles.
J. L. Griffin, Skelly Oil Co., Tulsa.
C. C. Kelley, The Texas Co., Tulsa.
Norris Plank, Shell Petroleum Corp., Tulsa.
James Porter, Jr., Empire Gasoline Co., Bartlesville.
R. I. Short, Prairie Oil & Gas Co., Tulsa.

Outage Committee

Emby Kaye, Chairman, Skelly Oil Co., Tulsa.
M. E. Foster, Phillips Petroleum Co., Bartlesville.
J. E. Jones, Marland Oil Co., Ponca City.
E. L. Stauffacher, Empire Oil & Refining Co., Bartlesville.
J. R. Freeman, Carter Oil Co., Tulsa.
F. E. Burke, Chestnut & Smith Corp., Tulsa.
F. B. Mack, Shell Petroleum Corp., Tulsa.

Plant Operators' Meetings Committee

G. M. Davidson, Ch. for Okla. & Kans., Empire Oil & Refining Co., Bartlesville.
F. G. Yonker, Ch. for Texas, Chestnut & Smith Corp., Ranger.
J. E. Dale, Barnsdall Oil Co., Tulsa.
H. M. Coulson, Sinclair Oil & Gas Co., Tulsa.
A. E. Perry, Carter Oil Co., Seminole.
D. B. Hiatt (Texas only), Texas Pacific Coal & Oil Co., Fort Worth.
F. E. Shryock (Tex. only) Shell Petroleum Corp., Tulsa.
Emby Kaye, Skelly Oil Co., Tulsa.

Sales Managers Committee

M. E. Foster, Chairman, Phillips Petroleum Co., Bartlesville.
A. F. Wood, Vice-Ch., Chestnut & Smith Corp., Tulsa.
F. D. Bostaph, Texas Pacific Coal & Oil Co., Fort Worth.
S. B. Crooks, Empire Oil & Refining Co., Bartlesville.
J. C. Evans, Barnsdall Oil Co., Tulsa.
F. C. Hall, The Henderson Co., Tulsa.
O. B. Lloyd, Marland Oil Co., Ponca City.
J. A. LaFortune, Warren Petroleum Co., Tulsa.
R. M. McCalley, Forrest E. Gilmore Co., Tulsa.
J. F. Nagle, Skelly Oil Co., Tulsa.
A. T. Scherer, Sinclair Oil & Gas Co., Tulsa.

Specifications Committee

S. S. Smith, Chairman, Shell Petroleum Corp., Tulsa.
S. B. Crooks, Empire Gasoline Co., Bartlesville.
Geo. P. Bunn, Phillips Petroleum Co., Bartlesville.
H. W. Harts, Amerada Petroleum Corp., Tulsa.
Roscoe Howard, Marland Oil Co., Ponca City.
P. S. Magruder, General Petroleum Corp., Los Angeles.
J. M. Yaiden, Skelly Oil Co., Tulsa.
A. T. Scherer, Sinclair Oil & Gas Co., Tulsa.
A. J. Schlosser, Barnsdall Oil Co., Tulsa.
F. R. Staley, Texas Pacific Coal & Oil Co., Fort Worth.
A. F. Wood, Chestnut & Smith Corp., Tulsa.

Tank Car Committee

Walter Grubb, Ch., Barnsdall Oil Co., Tulsa.
A. C. Holmes, Vice-Ch., Empire Oil & Refining Co., Tulsa.
J. C. Carothers, Chestnut & Smith Corp., Tulsa.
L. E. Frazier, Phillips Petroleum Co., Bartlesville.
P. S. Magruder, General Petroleum Corp., Los Angeles.
W. K. Warren, Warren Petroleum Co., Tulsa.

Technical Committee

W. A. Melton, Ch., Shaffer Oil & Refining Co., Tulsa.
R. C. Alden, Vice-Ch., Phillips Petroleum Co., Bartlesville.
H. S. Cole, Jr., The Texas Co., Los Angeles.
G. M. Davidson, Empire Oil & Refining Co., Bartlesville.
H. E. Felt, Warren Petroleum Co., Tulsa.
Roscoe Howard, Marland Refining Co., Ponca City.
Emby Kaye, Skelly Oil Co., Tulsa.
W. R. Lentz, Chestnut & Smith Corp., Tulsa.
S. R. Evans, Sinclair Oil & Gas Co., Seminole.
H. W. Manley, Barnsdall Oil Co., Tulsa.
Geo. L. Shaner, Carter Oil Co., Tulsa.
S. S. Smith, Shell Petroleum Corp., Tulsa.

Traffic Committee

C. R. Musgrave, Ch., Phillips Petroleum Co., Bartlesville.
F. E. Burke, Vice-Ch., Chestnut & Smith Corp., Tulsa.
S. B. Crooks, Empire Oil & Refining Co., Bartlesville.
J. E. Davis, Lone Star Gas Co., Dallas.
A. H. Evans, Akin Gasoline Co., Tulsa.
S. J. Payton, Sinclair Oil & Gas Co., Tulsa.
E. A. Starr, Texas Pacific Coal & Oil Co., Fort Worth.
R. E. Stewart, Barnsdall Oil Co., Tulsa.
A. F. Winn, Skelly Oil Co., Tulsa.

For CLEAN SPEEDY PORTABLE Grease Dispensing SERVICE!

BENNETT 100 POUND GREASING OUTFIT

The new, improved, watertight, dust-proof Bennett 100 lb. Greasing Outfit possesses real service advantages for the dealer who is interested in speedier grease dispensing. The outfit can easily be handled over dirt and cinders and placed in position for greasing in small and congested places. Typical Bennett Quality Built throughout.

Self-Closing NON-DRIP NOZZLE

New self-closing patented non-drip nozzle with flanges arranged to fit any style transmission. Positive shut-off valve—the only "one-man" nozzle on the market.

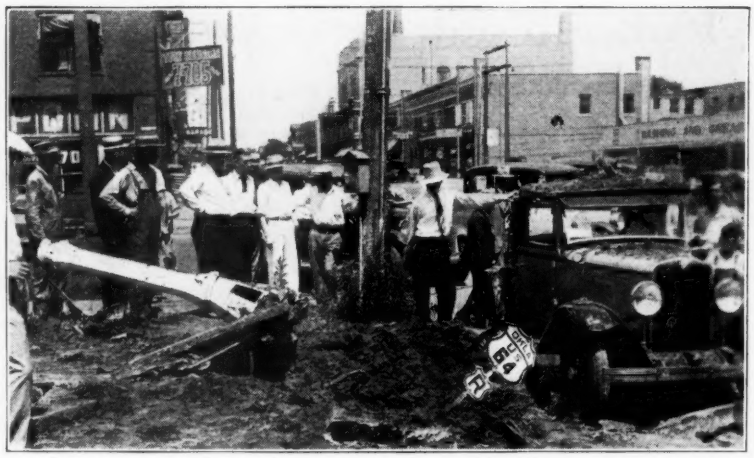
BENNETT PUMPS CORP., Muskegon, Mich.
SERVICE STATION EQUIPMENT CO., LTD., Toronto and Winnipeg.
REPUBLIC STEEL PACKAGE CO. OF CALIF., Richmond, Calif.
BENNETT EXPORT CORP., 32 Broadway, New York.

Write for Bulletin No. 100!

Investigate the many outstanding features of superiority of this Greasing Outfit before you invest in new greasing equipment.

"Symbol of Quality"

Bennett Pumps Corporation
QUALITY BUILT
Bennett
Dispensing Equipment
FOR OIL MARKETERS
Muskegon, Michigan



A tossed away match and an uncovered inlet pipe of an abandoned gasoline storage tank caused an explosion in Tulsa recently, with the damage shown above. The pedestrian whose match caused the blast was jarred but otherwise uninjured

Abandoned Tank in Ground Is Explosion Hazard

TULSA, July 25.—A hazard in leaving uncovered any vents or openings to underground gasoline storage tanks, even though they may be empty and abandoned, was demonstrated in Tulsa recently for the second time in two years when fumes from the tanks became ignited and caused explosions.

A match tossed away by a pedestrian who had lighted a cigarette furnished the latest example. The pedestrian was walking near the corner of Seventh street and Boulder avenue. A service station formerly had occupied the corner lot, but the structure had been torn down several months ago and the space used as a parking lot. One of the storage tanks for the pumps was buried almost under the sidewalk.

When the match was flipped away it dropped into the open inlet pipe sticking out just above the level of the ground. The gas fumes were ignited and the explosion followed. The accompanying picture gives a fair idea of the damage. The pedestrian was uninjured.

One method of making certain an abandoned underground gasoline storage tank will not contain fumes has been worked out by Fire Chief Dick Pitts of the Tulsa department. His plan was developed as a result of an appeal for help from a man who did not want to run the risk of explosions similar to the one in Tulsa a few days ago.

Chief Pitts first had the tank filled to overflowing with water. He let the tank overflow for several minutes to make sure that the gasoline and of course the fumes had been forced out of the tank. Then he took a long steel spear and punched several holes in the bottom of the tank, inserting the spear in the inlet pipe. He then capped the inlet pipe. The water either will remain in the tank or slowly seep out, but in any case the gasoline and fumes have been driven out and the tank made safe. This plan probably is more economical than digging out the tank.

A July 4th celebrant in Tulsa two years ago conceived the idea of getting a rifle-like explosion from his firecrackers by dropping them down a two-inch pipe he found sticking out of the ground near the sidewalk at Second street and Detroit avenue. He lighted one of the firecrackers and tossed it accurately into the pipe. Approximately 50 feet of sidewalk were ripped up by the resulting explosion. The pipe led to a storage tank which had been abandoned for more than three years. The gas fumes, however, had remained in the tank in sufficient volume to create an explosion of considerable force.

While discussing these two explosions Fire Chief Pitts of the Tulsa department said he had found another hazard which was more likely to occur in the winter months, when tank cars of gasoline were unloaded while standing on tracks over which were electric wires, especially trolley wires.

The water in the outlet valve of the tank car was likely to freeze, Chief Pitts said, and his department had been called out for two or three fires because the man seeking to unload the tank car took a long iron pipe and tried to break the ice out of the bottom valve by climbing on top of the car and removing the dome cover and jabbing down at the ice in the valve. The pipe would come in contact with the wires causing a spark and explosion or fire.

Alemite Answers Critics of Its Policies and Advertising

CLEVELAND, July 26

CRITICISMS of the advertising and policies of the Alemite Mfg. Corp. have been answered by G. C. Davis, manager of the Alemite Lubricator Co. of Missouri in a letter to J. A. Motter, secretary of the Kansas Oil Men's Association. The letter, made public in the current number of the *K.O.M.A. Bulletin*, follows:

"It has been brought to our attention that untrue and unwarranted statements are being made about the policies of this company and the Alemite Manufacturing Corp. by certain grease salesmen which in justice to ourselves we desire to correct.

"The Alemite business is conducted along two different channels:

"1—We are interested in selling Alemite systems and equipment to automotive and industrial firms for the purpose of standardization.

"2—We are interested in selling Alemite service equipment and lubricants to retail automotive outlets.

"It is in the latter phase of our business that the misunderstandings seem to have occurred . . . and the most charges made against.

"The charges made against Alemite methods and motives are: 1—We are using Alemite equipment as a 'club' to sell lubricants. The truth of the matter is that we pursue a definite policy of selling this type of equipment to ANYONE who chooses to buy it, REGARDLESS of what he is going to use it for and REGARDLESS of what type of lubricant he proposes to use in it. We have yet to sell the first Alemite service gun with definite understanding that the dealer or user must use Alemite lubricants in it. This is a fact that can be proven by questioning anyone that we have sold a gun to.

"The only favoritism shown the dealer who uses Alemite lubricants exclusively is to supply him with the familiar Alemite gold and blue service sign indicating an Alemite service station:

"'We Use Genuine ALEMITE Lubricants, Alemite-ing Costs No More Than Ordinary Greasing.'

"The exclusive use of Alemite lubricants, the use of adequate service equipment EITHER OURS OR A NON-INFRINGING COMPETITOR'S are the sole and only requirements for the display of this sign. Note, 'either our equipment or a non-infringing competitor's.' Surely no thinking man can take issue with us on this policy.

"Another charge is that Alemite advertising raps legitimate competitors which is absolutely untrue.

"Alemite publicity exploits the copyrighted word 'Alemite-ing' to designate lubrication with genuine Alemite lubricants. It aims to create consumer demand for Alemite products on the same basis, we believe, as all other national advertising from the oil industry aims to create consumer demand for certain branded petroleum products. In this, as in the sale of our equipment, every legitimate effort to increase Alemite lubricant sales is used—but that is all.

"Alemite publicity, however, DEFINITELY AND PURPOSELY carries on an aggressive campaign against the use of cheap, low grade greases in the Alemite system.

"In bringing this to public attention and warning against irresponsible greasing stations selling cheap and low grade greases under the guise of high quality lubricants, is in our opinion a decidedly HELPFUL SERVICE TO EVERY producer or seller of HIGH QUALITY lubricants in the field, and very definitely a public service to the millions of car owners in America; for cheap inefficient greases do not function properly in the Alemite systems. In self protection, we strive to drive these inferior products from the market. And that, surely, is a legitimate activity.

"We do not believe that any fair minded man, after analyzing exactly what Alemite is doing and striving to do, would ever condemn the activities of our organization."

Free Gasoline on Opening Day Builds Sales

ALBUQUERQUE, N. M., July 26.—An appealing color scheme and free gasoline on the opening day have helped to build up sales at the recently opened service stations in New Mexico of the Phillips Petroleum Co., Bartlesville, Okla.

When that company's new English-type station opened in Albuquerque recently, the company gave away coupons good for 5770 gallons of gasoline to 1154 customers. The only requirement was that the customer bought five or more gallons of gasoline on the opening day, and then came back another day to get the five free gallons.

This was done, according to Paul Hunt, manager at Albuquerque, to get the customers to come back twice, affording them an opportunity to give the gasoline a more thorough trial and to get acquainted with the company's service.

Shortly after the opening of the first station, another one was opened by the same company here. The two stations were doing a neck-and-neck business, Mr. Hunt reports.

Attendants at Phillips stations are taught to inquire of customers if they want the tank filled, rather than asking them how much, with the result that in the majority of cases, the customer says "yes" to the filling.

An outdoor display of bottled lubricating oils, packaged goods, tires, and other products sold at the station, helps the sale of these goods.

Color experts with the du Pont company have worked out the color scheme of orange, pea green and light blue for these stations. The name plates are black with gold lettering.

Another attractive feature about these stations is their cleanliness. An effort is made to keep the sta-

This new English-type service station of the Phillips Petroleum Co. at Albuquerque, N. M., displays its motor oil bottles and tires outside

THE PREMIUM IS OFF!

"SILENCER now offered to the trade *at no extra cost.*" Peak anti-knock, and at the ordinary-gasoline price. Think of it!

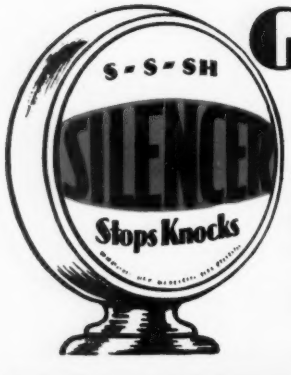
What *can't* you do with such a gasoline—45-50% Benzol Equivalent, and the other qualities that are carrying SILENCER to new high marks in consumer sales. All at no extra cost to you.

Winkler Crude (natural high anti-knock) and Burford advanced refining methods make this possible.

Buy it "regular" and sell at a premium. Read the specifications and act quickly. Write, wire or phone.

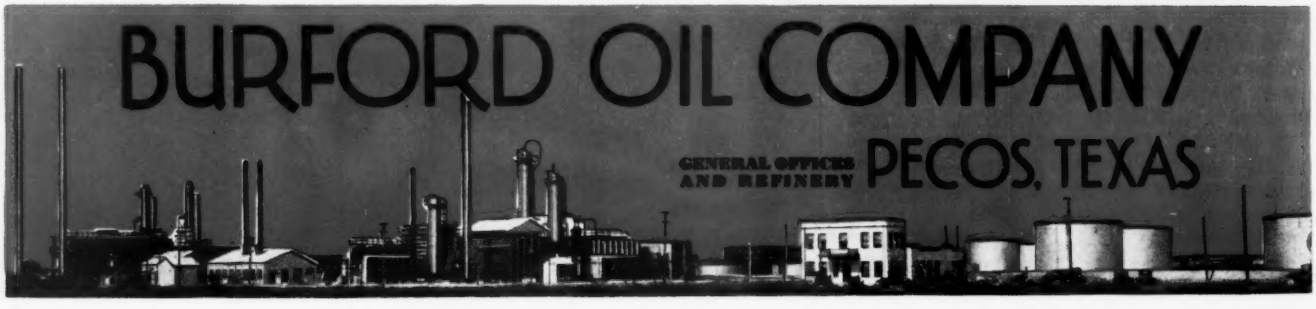
Deliveries made on Santa Fe GFX (Fruit Express) trains cutting one to three days off ordinary schedules

SILENCER GASOLINE



SPECIFICATIONS

45-50% Benzol Equivalent . . Initial 100. . .24% off at 212 . . . 50% off at 282 . . . 90% off at 376 . . . end-point 400-410 . . . corrosion, sulphur, and gum O. K. . . . color, red.



tions spotless and the window and outdoor display of goods in neat order. There are flower boxes to help beautify the station.

The company operates three service stations in Albuquerque. At its super station here, services are complete. Men who do the greasing and oiling work are given specification booklets obtained from automobile agencies giving the oil and grease requirements of various makes of cars.

Cleveland Stations Vie In Flower Contest

CLEVELAND, July 27.—A compaign to determine Cleveland's most attractively groomed service station from a landscaping standpoint, in which the motorist is asked to nominate his choice, has been brought to a close by the Cleveland Plain Dealer, morning newspaper.

Cleveland's garden clubs have joined the movement for better looking stations by offering cash prizes to the prize winning station crews. A trophy will be given to the oil company whose stations as a group make the best proportionate showing, and cash awards totaling $550 go to the crews. These cash prizes will be accompanied by bronze plaques furnished by the newspaper upon payment of a $10 entry fee by the oil company. The plaques are appropriate for hanging on the station wall.

Landscape improvement and maintenance, and taste in floral design, not architecture, were to be the basis of the comparison, according to John A. Crawford, agriculture editor of the Plain Dealer, who is in charge of the oil station contest.

Five men and women of various professions were to act as district judges, each to head a committee of five to 15 judges.

In order for a station to be nominated for the contest, the station attendant asked the motorist driving to his station to fill out a nomination blank on which space was left for filling in the name of the oil company operating the station, the location, and similar information. Twenty-five such nominations were necessary for any station to qualify for the prizes. These blanks, properly signed by the motorist, were then mailed in to the Greater Cleveland Garden Campaign of the Plain Dealer.

A total of 153 service stations have been entered in this campaign. They are stations of the Canfield Oil Co., Cities Service Oil Co., Columbia Refining Co., Commonwealth Oil Co., Great Western Oil Co., National Refining Co., Paragon Refining Co., Shell Petroleum Corp., Standard Oil Co. of Ohio, and The Texas Co.

4 REASONS WHY

Columbian Dominates

COLUMBIAN has set the pace in the oil transportation industry because you get:

The most economical truck tank in both initial cost and upkeep.

The only 3-point supported, partition mounted, integrally welded truck tank.

The benefit of a quarter century's experience in building truck tanks.

The services of an Engineering Department adequate to every demand.

Here's a truck tank for refueling service at airports. Write us about your special oil transportation problems.

COLUMBIAN STEEL TANK COMPANY

EST'D 1894 TANKS FOR THE WORLD

1405-1625 WEST 12TH STREET KANSAS CITY, MISSOURI

30 Church Street
New York, N. Y.

617 Wright & Callender Bldg.
Los Angeles, Calif.

REPUTATIONS COME HARD

AND GO EASY...PROTECT YOURS

The station that sells Phillips 66 enjoys INSURED REPUTATION. Its customers are satisfied and loyal—they keep coming back for more—because this superior gasoline of Controlled Volatility gives them easy starting, rapid acceleration, power, mileage to a degree they've never known before. Such customers are a mighty valuable asset. They're profit builders. Let Phillips 66 help you build up a big list of loyal, steady customers . . . Write or wire for quotations.

◆ ◆ ◆

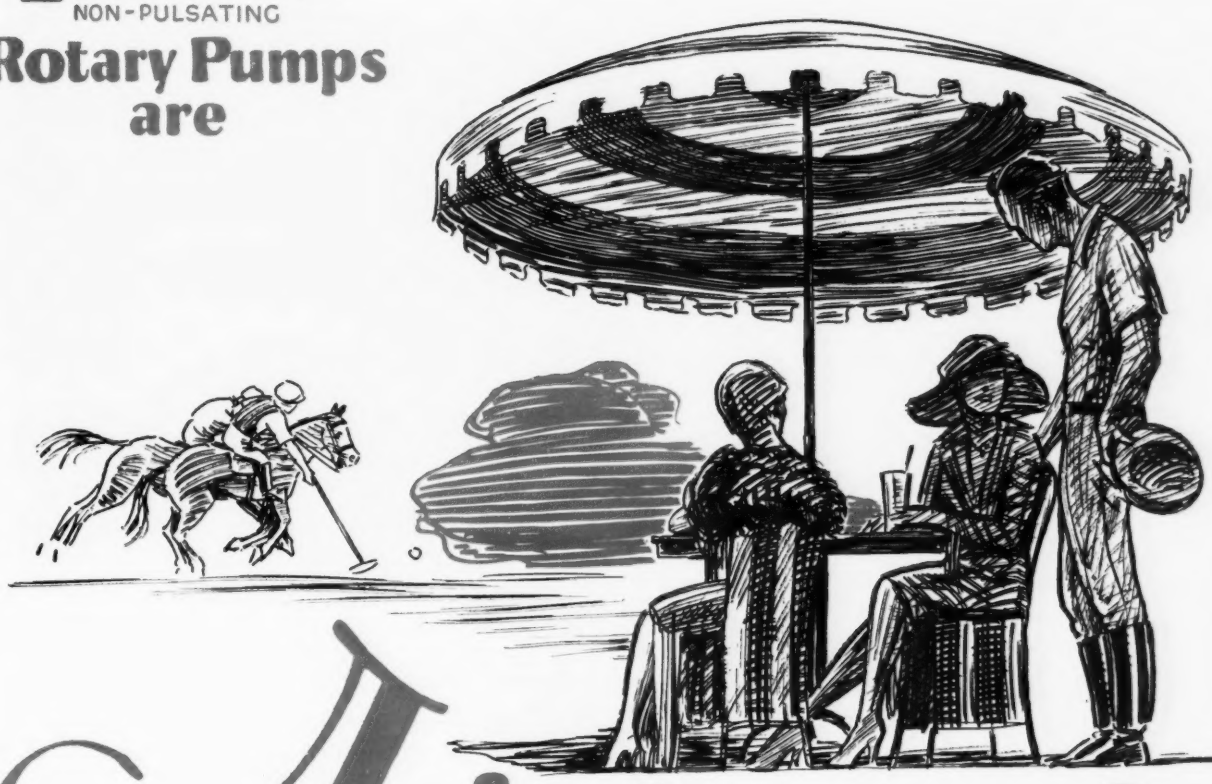
Backed by a tremendous organization engaged in the production of a line of superior motor fuels including "Phillips 66," "Phillips Aviation" and "Phillips Benzo-Gas." The vast experience of the research department of this company is offered to jobbers and refiners on any problem in CONTROLLED VOLATILITY.

PHILLIPS PETROLEUM COMPANY, BARTLESVILLE, OKLA.

PHILLIPS 66

NATURAL GASOLINE FOR CONTROLLED VOLATILITY

FERRO
NON-PULSATING
Rotary Pumps are



Aristocrats

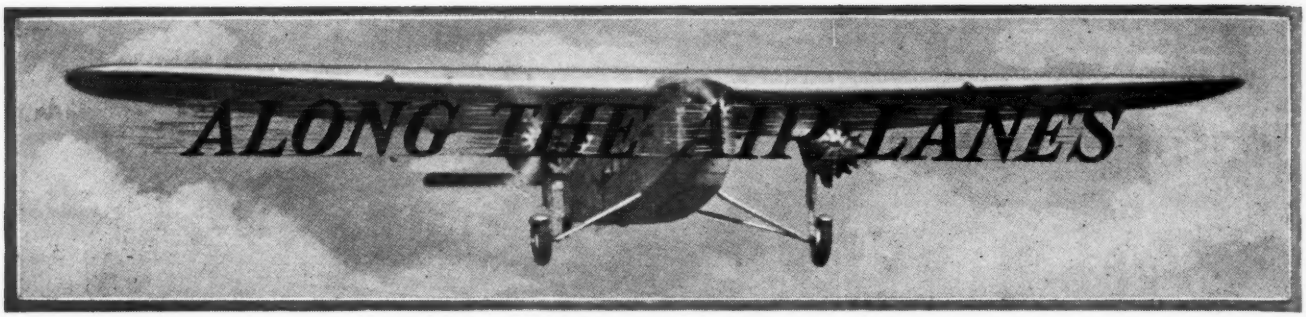
CLASS is the hallmark which distinguishes the real "aristocrat", whether it's in a man, a polo pony or a mere machine.

And it's "class", not only in the pump itself but in the work that it accomplishes, that makes the Ferro Rotary Pump a real "aristocrat" in the dispensing of gasoline.

When you buy Meter or Visible Gasoline Pumps, with Ferro Pumping Units, you are assured of absolute pump satisfaction with years of dependable and care-free service.

Ferro Rotary Pumps are sold only to Manufacturers of Gasoline Dispensing Equipment.

The Ferro Machine & Foundry Co
CLEVELAND O
U S A



THERE is no place in the United States which can not be reached by daylight from Ponca City, Okla. with this swift Lockheed monoplane bought recently by the Continental Oil Co. (Marland). The ship, said to be one of the fastest commercial types built, has a cruising speed of 135 miles per hour, and a top speed of 170 miles per hour. It is powered with a 420 h.p. Pratt & Whitney "Wasp" motor, uses 18 gallons of gasoline per hour, and has a cruising radius of six hours. In addition to the pilot, there is room for five passengers.

Save in gasoline carrying capacity, this plane is similar to the one in which Erle P. Halliburton, president of the S.A.F.E., and of the Halliburton Oil Well Cementing Co., flew from Los Angeles to Tulsa in eight hours and ten minutes, a distance of 1376 miles. The Halliburton plane was piloted by Lowery Fritz. John Halliburton, brother of Erle Halliburton, was the third man in the plane, which averaged 168 miles per hour during the flight.

The monoplane was delivered to the Continental company by Bob Cantwell, of the Southwest Air Fast Express lines, district agent for the Lockheed plane.

NATIONAL AIR RACES AND AERONAUTICAL EXPOSITION, Cleveland, O., Aug. 24 to Sept. 2.

The country's most famous flyers, pilots, aircraft operators, executives and officials of airplane and equipment companies will be there.

$100,000 will be awarded in cash prizes in the race events under the supervision of the National Aeronautic Association.

Oh, yes, the Army and Navy department officials will be there, too.

A petroleum by-product that keeps automobile radiators from freezing in the winter, has been found to be an efficient cooling agent for summer use in airplanes. That product is ethylene-glycol. Tests conducted by the U. S. War Department have disclosed that no serious defects were apparent after operating an airplane 50 hours with the glycol in the radiator. That department seeks a means of cooling the motors of multi-engine planes through the use of wing radiators. It is believed that glycol will help to increase the speed and pay loads of planes.

A romance which began at the Miami, Fla. air races last January between M. C. "Bob" Loutt, 28, aviation manager for the Kendall Refining Co., Bradford, Pa., and Miss Viola Curwood, Owosso, Mich., culminated in marriage of the pair on July 16 at Cleveland, O. Miss Curwood is a daughter of the late James Oliver Curwood, well known author of he-man stories of the great open spaces.

Mr. and Mrs. Loutt planned to honeymoon via airplane.

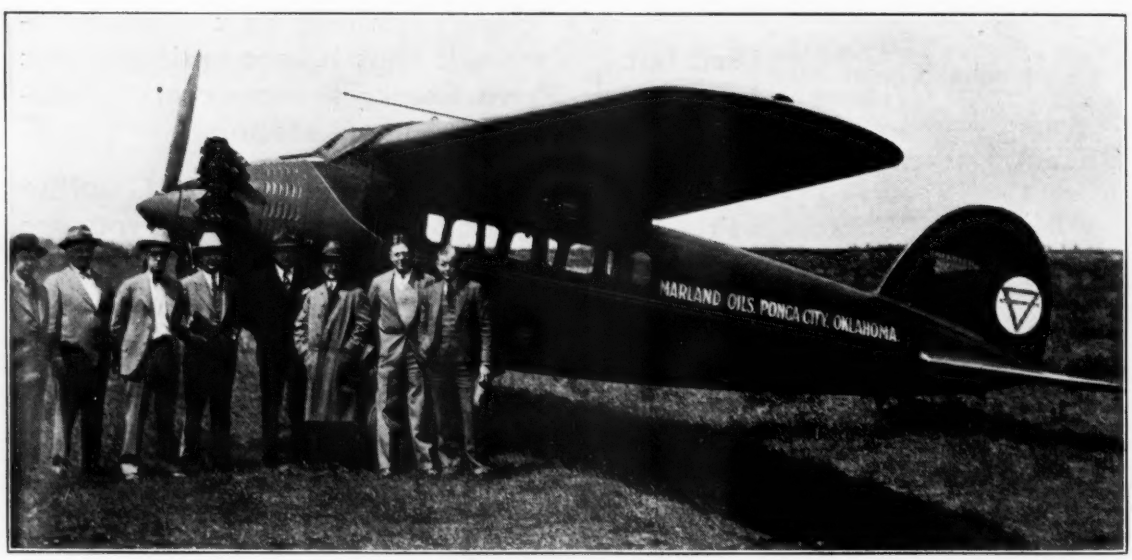
Mr. Loutt expects to zigzag a route cross country in the interests of the National Air Races which will be held in Cleveland beginning Aug. 24.

* * *

Approximately $2,500,000 worth of aviation gasoline contracts have been signed by the Richfield Oil Co. of California, Los Angeles, for the next 12 months, according to C. M. Fuller, president.

That company is starting distribution of its aviation gasoline along the Atlantic seaboard and has already closed contracts at 40 airports in the east, it is reported.

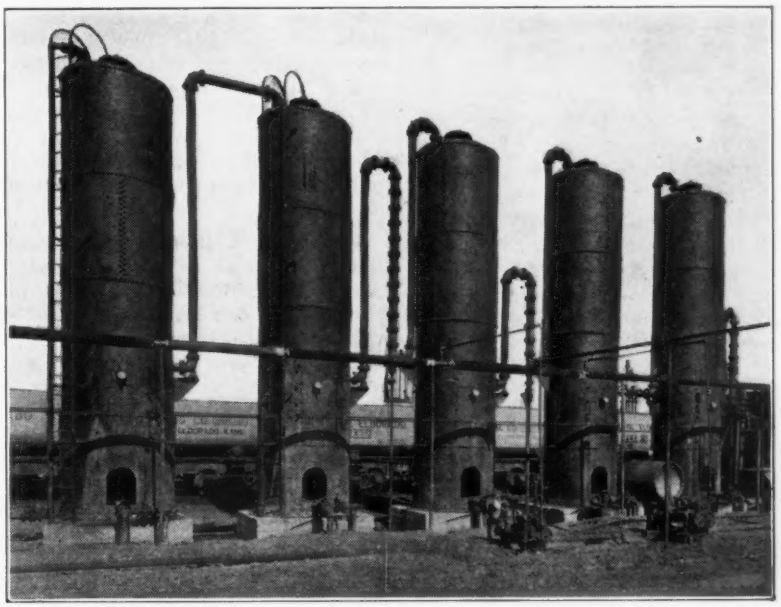
Among commercial aviation companies who have signed for Richfield gasoline are: Transcontinental Air Transport, Western Air Express and Standard Air Lines.



New monoplane of the Continental Oil Co. (Marland), Ponca City, Okla. Left to right: J. A. Edwards, lubricating engineer. Walter Miller, vice president in charge of refinery operations; E. O. Bennett, chief engineer; E. R. Turner, assistant to the vice president in charge of production; D. J. Moran, president; W. W. Bruce, vice president and secretary; Ray Schrader, pilot, all of the Continental company; and Bob Cantwell, of the Southwest Air Fast Express

CONTINUOUSLY FLOWING!

Crude oil is converted into better petroleum products, faster and more economically—



THE continuous treating equipment used in producing ElDorado Petroleum Products consists of a series of towers through which the oil flows continuously. At the proper stages of the flow the oil is met with the treating chemicals and neutralizing agents. Operated by this controlled flow of oil, the chemicals are charged through automatic devices which assure perfect control and absolute uniformity at all times.

CONSIDER THE ADVANTAGES TO YOU of buying your gasolines from a refinery up to date in every respect! Our ultra-modern continuous treating equipment gives the advantages of speedy production, and produces products with better color stability, and very low gum content.

By the use of this modern system for purification of gasolines, the ElDorado Refining Company is merely keeping up its policy of giving its dealers the best possible service.

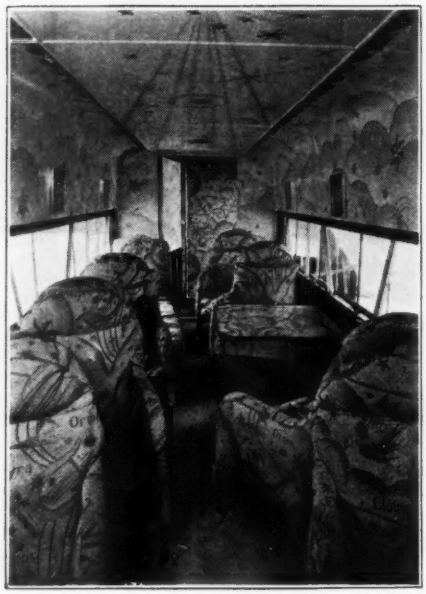
If you are not already using ElDorado products, by all means order a car today. You'll soon realize the difference—in the increased trade and customer satisfaction it will bring.

The ELDORADO REFINING Co.

ESTABLISHED 1916

ELDORADO, KANSAS

JUST CALL L.D.11



You know you're in the skies when you ride this plane of the Richfield Oil Co. The effect of the upper regions has been created through the clouds and stars appearing on the walls and furnishings

Any one riding the recently acquired, 10-passenger cabin plane of the Richfield Oil Co., Los Angeles, will hardly fail to realize that he is up in the skies, far away from earthly things.

The accompanying picture shows how an artist's paint brush and weaver's loom have helped to create a heavenly atmosphere.

Walls, ceiling, chairs, doors and folding tables are decorated in billowing clouds, among which sparkle many of heaven's brightest constellations. Woven into the material covering the easy chairs are flashing meteors, comets and designs of some of the most famous of stars, together with their names.

There is Orion, Ptolemy's constellation, and the most marked in the heavens. Occupying another prominent design is Lyra, bright star of the northern constellation, which represents the lyre of Mercury. A design of the harp next to the star carries out the significance of this particular body.

Lupus, Globus, Virgo and Corona, and other heavenly bodies, complete the pattern in the material and the designs on walls and ceiling.

* * *

One of the newest of advertising stunts along the Pacific Coast is the "voice of the sky"—a tremendously amplified sound impulse from an airplane used by the Standard Oil Co. of California to introduce its Standard Ethyl gasoline.

The announcer sits in the cabin of the plane, the cabin being heavily insulated to shut out the roar of the engines. He speaks calmly into a microphone and his words travel to the crowds below through the amplifying sets, into the reproducers and out through the huge horns, according to the *Standard Oil Bulletin*, official publication of the company.

When the plane soars above the crowds, the announcer hurls out greetings, snatches of music and general "patter" to attract attention. One of his frequent remarks is "Ha-ha! Why don't you use Standard Ethyl gas?"

Many amusing stories and comments have come into the Standard offices since this stunt has been going on. It is said that in Berkeley, Calif., a lady was indulging in a sun-bath, minus wearing apparel. "Ha-ha! Why don't you use Standard Ethyl gas?" came a voice a mile above her. It was a part of the patter, spoken at random, though to this sun-bather, it seemed personal and not in good taste. She snatched her kimona and bolted into the nearest doorway.

Another coincidence was reported when two ladies who were about to start off in their new motor-boat, were having no end of trouble in trying to get the motor started.

"Ha-ha! Why don't you use Standard Ethyl gas?" came a voice from the sky. The ladies thought the man had a long range of sight as well as of voice.

The crew of this plane consists of pilot, mechanic, operator and announcer. Equipment in the plane suggests a combination studio, laboratory, and generating and broadcasting station. The voice is not sent by radio, but is merely tremendously amplified. The vibrations of these amplified sounds, according to *Popular Mechanics Magazine*, shake the floor of the plane until it feels as though it were sliding along rough ground. The control panel of the amplifying set is hung from special spring supports, which protect it from the jars and vibrations of the plane.

The reproducer that sends the music into the sky from the phonograph records is held by a patented clasp that keeps the needle in the groove on the record, regardless of the tilt of the plane or the jar to which it may be subjected.

* * *

Letters mailed in Tulsa via air mail before 11 a.m. will reach New York the next morning at 6.43 a.m. as a result of the establishment of a two-a-day air mail plane service beginning July 1.

The new schedule calls for a plane to leave Tulsa for the north and east at 12:10 p.m. each day. A plane serving the south and southwest will leave Tulsa at 2:30 p.m. each day. Connections are made at Ponca City with the Dallas-Chicago planes.

The regular night plane will be continued. The plane leaves at 9:20 p.m.

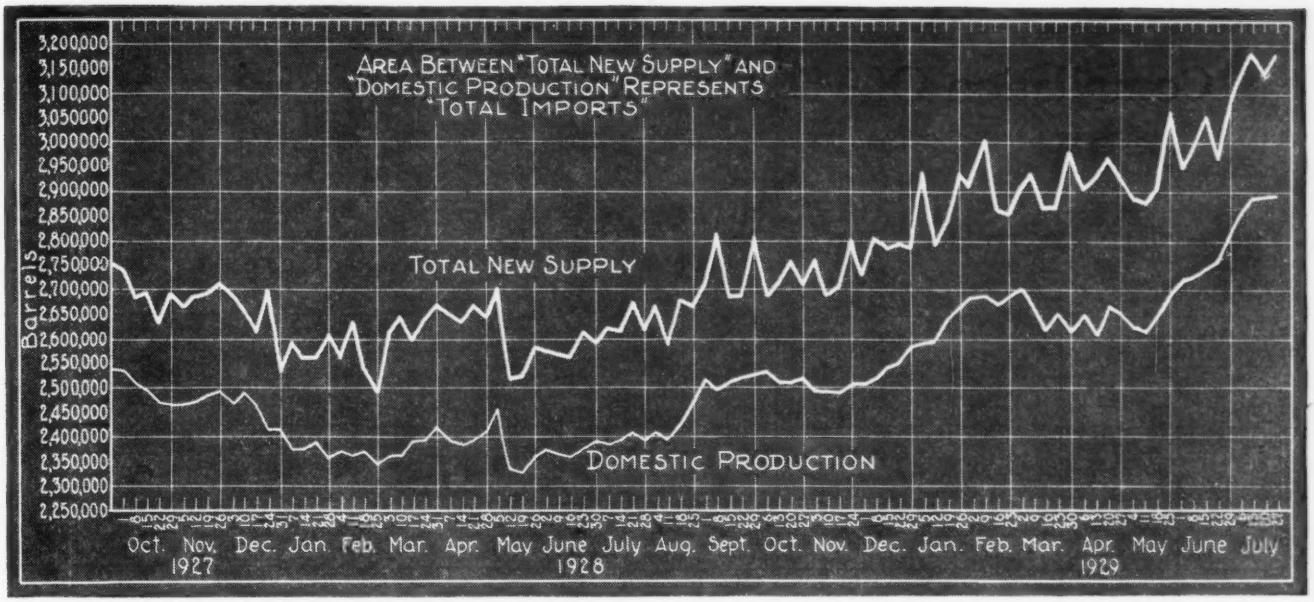
As a result of the day plane service, letters mailed by 11 a.m. will reach Chicago, for instance, at 7:20 o'clock the same afternoon, and Cleveland, O., at midnight. Letters will reach Washington, D. C. at 7:10 a.m. the following day, and Los Angeles at 5:25 p.m. the following day.

* * *

Formation of a country-wide aviation express company that would have the same relation to the nation's air business as the American Railway Express Agency, Inc., bears to the country's railroads, is being considered by the Curtiss-Wright Corp. and other leading aeronautical organizations, as well as railroad express executives, according to newspaper reports.

Specialist salesmen of the Anglo-American Oil Co., Ltd., London, England, use this airplane for transportation. The company has decided to go in for commercial aviation, according to H. S. Tegner, manager of the technical sales department. The small type of aircraft greatly facilitates matters when urgent calls come from distant parts of the country, Mr. Tegner says.

Daily Average Crude Oil Production and Imports



Daily average gross output of United States, by fields, for week ending with dates below as compiled by American Petroleum Institute

PRODUCTION SUMMARY

	July 27	July 20
Production east of Rockies	2,031,050	2,013,650
Increase		17,400
Total Production in U. S.	2,896,650	2,893,950
Increase		2,700
Crude Oil Imports	288,000	245,741
Increase		42,286
Total Crude Supply	3,184,650	3,139,646
Increase		44,986

OKLAHOMA

	July 27	July 20
Allen Oome	25,050	25,150
Asher	11,550	12,650
Blackwell	3,700	3,750
Bowlegs	34,400	34,550
Braman	3,950	3,850
Bristow-Slick	20,750	20,650
Burbank	19,500	19,600
Carr City	14,200	13,900
Cromwell	8,050	8,050
Cushing	18,600	18,600
Davenport	1,400	1,400
Duncan District	7,500	7,500
Earlsboro	83,000	81,800
East Seminole	5,300	5,550
Fox	1,400	1,400
Garber	5,450	5,650
Graham	4,350	4,300
Healdton	13,050	13,000
Hewitt	7,900	7,950
Hubbard	1,800	1,800
Little River	79,800	76,850
Logan County	23,000	21,050
Maud	12,000	11,600
Mission	30,700	32,200
North Okmulgee	12,750	12,800
Oklahoma City	24,700	21,450
Osage (outside Burbank)	26,050	26,100
Papoose	3,250	3,300
Pearson	1,250	1,200
St. Louis	74,150	72,300
Scholem-Alechem	12,700	12,700
Searight	11,000	11,350
Seminole	33,600	33,750
South Okmulgee	8,250	8,350
Thomas	850	850
Tonkawa	9,350	9,550
Wewoka	4,700	4,700
Yale-Jennings	7,050	7,000
Others	60,450	59,500
Total, Oklahoma	726,500	717,700
Increase		8,800

KANSAS

Augusta-Fox Bush	3,100	3,100
Churchill	7,100	6,100
Eldorado-Towanda	13,000	12,900
Florence-Covert	1,000	950
Greenwood County	20,500	21,100
Oxford	4,500	4,500
Peabody-Elbing	3,350	2,800
Rainbow Bend	1,050	1,050
Russell	3,100	3,200
Sedgwick County	36,500	36,500
Others	33,500	32,800
Total, Kansas	126,700	125,000
Increase		1,700

NORTH LOUISIANA

Bellevue	600	600
Caddo, light	9,450	9,450
Caddo, heavy	3,400	3,400
Cotton Valley	2,500	2,550
De Soto and Red River	3,700	3,700
Elm Grove	550	550
Haynesville	4,900	4,950
Homer	3,850	3,900
Pleasant Hill	500	500
Urania	6,400	6,300
Others	250	250
Total, North Louisiana	36,100	36,150
Decrease		50

ARKANSAS

Champagnolle	7,250	7,500
El Dorado	4,600	4,650
Lisbon	1,200	1,250
Nevada	1,000	1,000
Smackover, light	6,100	6,200
Smackover, heavy	46,950	46,950
Stephens	1,000	1,000
Others	100	100
Total, Arkansas	68,200	68,650
Decrease		450

TEXAS (Outside Gulf Coast)

Panhandle District

Carson County	7,500	7,100
Gray County	58,500	56,050
Hutchinson County	25,000	24,500
Wheeler County	850	600
Others	1,150	1,000
Total, Panhandle Texas	93,000	89,250
Increase		3,750

North Texas

Archer County	19,600	19,000
Burkburnett	8,650	8,700
Electra	11,700	11,800
Iowa Park and K. M. A.	4,650	4,700
Montague-Cooke	13,000	13,100
Wilbarger	28,250	27,000
Others	750	800
Total, North Texas	86,600	85,100
Increase		1,500

West Central Texas

Brown County	7,600	7,500
Callahan County	4,100	4,200
Coleman County	6,100	6,300
Eastland-Desdemona	7,200	7,000
Jack County	3,200	3,300
Palo Pinto County	350	400
Shackelford County	10,950	11,200
Stephens County	6,800	6,600
Throckmorton County	800	800
Young County	11,000	11,500
Others	700	600
Total, West Central Texas	58,800	59,400
Decrease		600

West Texas

	July 27	July 20
Crane and Upton Counties	45,500	45,200
Crockett County	2,000	2,100
Howard County	42,200	43,200
Jones County	3,300	3,400
Mitchell and Scurry Counties	2,650	2,700
Pecos County	138,300	139,900
Reagan County	17,900	18,100
Winkler County	142,000	140,200
Others	1,400	1,400
Total, West Texas	395,250	396,200
Decrease		950

East Central Texas

Boggy Creek	3,000	2,800
Corsicana-Powell	7,400	7,200
Currie	400	400
Mexia	5,300	5,400
Nigger Creek	300	400
Richland	350	350
Wortham	950	950
Total, East Central Texas	17,700	17,500
Increase		200

Southwest Texas

Dale	400	400
Laredo District	10,900	11,000
Luling	11,250	11,300
Lytton Springs	1,000	1,000
Salt Flat	48,550	47,250
Somerset	1,400	1,450
Others	4,200	3,950
Total, Southwest Texas	77,700	76,350
Increase		1,350
Total, Texas (Outside Gulf Coast)	729,050	723,800
Increase		5,250

GULF COAST

Coastal Texas

Barbers Hill	6,700	7,500
Batson	1,300	1,250
Big Creek	3,500	4,200
Blue Ridge	3,200	4,000
Boling	1,400	1,400
Damon Mound	600	600
Goose Creek	5,400	5,500
Hull	8,300	7,900
Humble	6,500	6,600
Orange County	2,800	2,850
Pierce Junction	16,000	17,150
Raccoon Bend	7,400	6,700
Saratoga	900	900
Somerville	2,500	2,500
Sour Lake	2,600	2,700
South Liberty	6,600	6,100
Spindletop	27,000	27,400
Sugarland	13,100	13,300
West Columbia	5,950	5,850
Others	4,250	3,750
Total, Coastal Texas	126,000	128,150
Decrease		2,150

Coastal Louisiana

East Hackberry	2,700	2,800
Edgerly	700	700
Evangeline	2,400	2,250
Lockport	3,350	3,600
Old Hackberry	1,900	2,100
Sorrento Dome	150	200
Sulphur Dome	2,250	1,600
Sweet Lake	50	50
Vinton	5,100	4,300
Others	800	750
Total, Coastal Louisiana	19,400	18,350
Increase		1,050
Total Gulf Coast	145,400	146,500
Decrease		1,100

ROCKY MOUNTAIN

Wyoming

Big Muddy	2,300	2,300
Elk Basin	750	750
Grass Creek	2,300	2,200
Labarge	2,050	2,500
Lance Creek	200	200
Lost Soldier	4,150	4,100
Oregon Basin	5,600	5,600
Rock Creek	2,450	2,350
Salt Creek	30,850	29,500
Others	3,850	3,600
Total, Wyoming	54,500	53,100
Increase		1,400

MONTANA

Cat Creek	1,450	1,450
Pondera	3,000	3,200
Sunburst	6,850	6,850
Others	100	100
Total, Montana	11,400	11,600
Decrease		200

Colorado

Florence	1,000	900
Fort Collins	2,250	2,200
Moffat (Craig)	1,400	1,500
Others	2,200	2,300
Total, Colorado	6,850	6,900
Decrease		50

New Mexico

Artesia	850	900
Hogback	100	100
Rattlesnake	1,150	800
Others	450	450
Total, New Mexico	2,550	2,250
Increase		300
Total, Rocky Mountain	75,300	73,850
Increase		1,450

CALIFORNIA

	July 27	July 20
Dominguez	10,000	10,500
Elwood-Goleta	27,000	27,600
Huntington Beach	44,000	44,000
Inglewood	23,500	23,000
Kettleman Hills	4,000	3,400
Long Beach	171,000	172,000
Midway-Sunset	67,000	66,000
Rosecrans	6,700	6,000
Santa Fe Springs	268,000	282,000
Seal Beach	48,000	47,500
Torrance	12,700	13,000
Ventura Avenue	57,000	58,500
Others	126,700	126,800
Total, California	865,600	880,300
Decrease		14,700

EASTERN

(Including Ill., Ind., Ky., O., W. Va., Pa., and N. Y.)	123,800	122,000
Increase		1,800

Compilation Of Mid-Continent Refinery Operations

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Mid-Continent Refinery Operations Week Ended July 26 (By Telegraph)

	Kansas	Oklahoma	North & Cent. Texas	West Texas	North La.-Ark.	Total Week Ended July 26
Plants Reporting	12	29	25	15	12	93
Da. Av. Cap. (Bbls.)	92,000	160,200	86,600	81,500	54,900	475,200
Da. Cracking Capacity	30,700	52,600	17,200	5,000	22,700	128,200
Da. Av. Crude Runs	62,579 + 6.9	118,292 + 4.2	68,341 + 12.7	49,271 — 6.1	59,012 — 13.1	357,495 + 1.3
Da. Av. Other Oils	4,831 — 51.6	8,301 — 11.1	1,249 — 63.8	6,981 + 50.7	4,401 + 21.7	25,763 — 17.1
GASOLINE—Gallons						
Stocks, July 19	25,006 000	69,826,000	15,777,000	6,990,000	15,696,000	133,295,000
Prod. 7-19 to 7-26	10,004,000 + 5.6	18,768,000 + 4.4	8,741,000 + 9.3	4,195,000 — 1.7	6,010,000 — 7.5	47,718,000 + 3.3
Ship. 7-19 to 7-26	12,924,000 + 7.6	21,244,000 + 8.3	8,117,000 — 19.2	4,524,000 — 8.8	6,473,000 + 64.5	53,282,000 + 5.3
Stocks, July 26	22,086,000 — 11.7	67,350,000 — 3.5	16,401,000 + 3.9	6,661,000 — 4.7	15,233,000 — 2.9	127,731,000 — 4.2
Ratio Sales to Prod.	129.2%	113.2%	92.9%	107.8%	107.7%	111.7%
KEROSENE—Gallons						
Stocks, July 19	8,768,000	6,335,000	2,598,000	44,000	973,000	18,718,000
Prod. 7-19 to 7-26	2,035,000 + 6.5	2,501,000 + 7.3	1,606,000 + 4.2	.....	422,000 + 37.0	6,564,000 + 7.4
Ship. 7-19 to 7-26	2,543,000 + 22.6	2,490,000 + 7.7	1,525,000 + 18.0	22,000 +266.6	210,000 — 27.6	6,790,000 + 13.7
Stocks, July 26	8,260,000 — 5.8	6,346,000 + 0.2	2,679,000 + 3.1	22,000 — 50.0	1,185,000 + 21.7	18,492,000 — 1.2
Ratio Sales to Prod.	124.9%	99.5%	94.9%	.....	49.8%	103.4%
STOVE DISTILLATE—Gallons						
Stocks, July 19	2,417,000	5,706,000	725,000	85,000	59,000	8,992,000
Prod. 7-19 to 7-26	149,000 + 37.9	563,000 — 33.1	176,000 + 9.3	102,000 + 29.1	120,000 — 4.8	1,110,000 — 15.7
Ship. 7-19 to 7-26	371,000 +375.6	433,000 — 13.2	99,000 + 2.0	123,000 + 12.8	98,000 + 1.0	1,124,000 + 27.7
Stocks, July 26	2,195,000 — 9.2	5,836,000 + 2.3	802,000 + 10.6	64,000 — 24.7	81,000 + 37.3	8,978,000 — 0.2
Ratio Sales to Prod.	248.9%	76.9%	56.2%	120.6%	81.7%	101.3%
GAS OIL—Gallons						
Stocks, July 19	11,063,000	30,020,000	4,152,000	12,498,000	8,551,000	66,284,000
Prod. 7-19 to 7-26	1,369,000 — 13.5	2,327,000 + 21.7	1,450,000 + 34.1	523,000 + 16.2	1,787,000 — 33.3	7,456,000 — 3.2
Ship. 7-19 to 7-26	1,280,000 — 60.0	1,462,000 + 28.1	1,521,000 +174.1	1,237,000 — 5.1	2,298,000 + 76.7	7,798,000 + 52.9
Stocks, July 26	11,152,000 + 0.8	30,885,000 + 2.9	4,081,000 — 1.7	11,784,000 — 5.7	8,040,000 — 6.0	65,942,000 — 0.5
Ratio Sales to Prod.	93.5%	62.8%	104.9%	236.5%	128.6%	104.6%
FUEL OIL—Gallons						
Stocks, July 19	15,467,000	58,941,000	51,851,000	*33,828,000	27,857,000	*187,944,000
Prod. 7-19 to 7-26	5,286,000 — 3.7	8,556,000 + 40.5	7,340,000 + 7.9	7,804,000 — 4.9	9,028,000 — 2.9	38,014,000 + 6.0
Ship. 7-19 to 7-26	6,359,000 + 39.2	7,331,000 — 3.8	6,342,000 — 15.6	14,908,000 +274.2	9,509,000 — 0.3	44,449,000 +33.7
Stocks, July 26	14,394,000 — 6.9	60,166,000 + 2.1	52,849,000 + 1.9	26,724,000 —21.0	27,376,000 — 1.7	181,509,000— 3.4
Ratio Sales to Prod.	120.2%	85.7%	86.4%	191.0%	105.3%	116.9%

Gasoline Produced by Various Methods, Week Ended July 26

	Kansas	% of Total	Oklahoma	% of Total	North & Cent. Texas	% of Total	West Texas	% of Total	Louisiana-Arkansas	% of Total	Total	% of Total
Straight Run	6,717,000	67.1	12,154,000	64.8	6,581,000	75.3	3,697,000	88.1	2,212,000	36.8	31,361,000	65.7
Cracked	2,906,000	291.0	5,092,000	27.1	1,639,000	18.8	345,000	8.2	3,330,000	55.4	13,312,000	27.9
Natural	381,000	3.9	1,522,000	8.1	521,000	5.9	153,000	3.7	468,000	7.8	3,045,000	6.4
Total	10,004,000		18,768,000		8,741,000		4,195,000		6,010,000		47,718,000	

+ or — columns are % change over previous week.

***Revised due to erroneous report previous week.**

Reduce Stocks of All Refined Oils in Mid-Continent

Staff Special—By Telegraph
TULSA, July 29

COMPILATION of weekly operations reports for week ended July 26 gathered by this publication from 93 Mid-Continent refiners is the most favorable from a statistical standpoint of any in the past several weeks. Stocks of all major commodities were reduced. This is first time this situation has occurred since the week ended April 27, 1928.

On several occasions stocks of all but one of the major commodities has been reduced. The last time was for the week ended February 22, this year at which time gasoline was the only commodity to show a stock increase.

Gasoline stocks for the week under discussion were reduced 5,500,000 gallons. Kansas refiners contributed approximately 3,000,000 gallons to-

Summary for the Month

Production and shipments, all reporting refineries, for four weeks ended July 26. Change in stocks figures from June 28.

GASOLINE

	Gallons
Production	188,362,000
Shipments	205,805,000
Net change in stocks	17,443,000
Ratio sales to production	109.3%

KEROSENE

	Gallons
Production	24,941,000
Shipments	25,222,000
Net change in stocks	—381,000
Ratio sales to production	101.5%

STOVE DISTILLATE

	Gallons
Production	5,122,000
Shipments	2,336,000
Net change in stocks	+2,786,000
Ratio sales to production	45.6%

GAS OIL

	Gallons
Production	28,921,000
Shipments	27,257,000
Net change in stocks	+1,664,000
Ratio sales to production	94.2%

FUEL OIL

	Gallons
Production	148,270,000
Shipments	158,028,000
Net change in stocks	—9,758,000
Ratio sales to production	106.6%

ward this reduction while Oklahoma refiners contributed 2,400,000 gallons. West Texas contributed 330,000 gallons and Louisiana-Arkansas 460,000 gallons. North Texas refiners added 300,000 gallons to storage. The reduction in the Louisiana-Arkansas, as first since the week ended June 7.

Crude runs were increased 4,400 barrels daily average. Kansas, Oklahoma and North Texas accounted for this increase. West Texas and Louisiana, Arkansas reducing their runs for the week.

Gasoline production was increased 1,500,000 gallons. This increase also is due to Kansas, Oklahoma and North Texas. The production cut in West Texas amounted to 70,000 gallons and in Arkansas-Louisiana to 400,000 gallons.

Gasoline shipments increased 7.6 per cent in Kansas and 8.3 per cent in Oklahoma. Shipments fell off 19.2 per cent in North Texas and 8.8 per cent in West Texas. An increase of 64.5 per cent was recorded in Louisiana-Arkansas. Shipment for the field as a whole increased 2,700,000 gallons to a total of 53,282,000 gallons. This is the second largest shipment total for the year. The record was for the week ended May 31 when shipments were over a million greater than for last week.

Kerosene production increased 400,000 gallons but shipments increased 800,000 gallons and stocks accordingly were reduced. Kansas was the only district to draw on stocks but the draft amounted to 500,000 gallons and was sufficient to cause the field as a whole to show a draft of 200,000 gallons. Kansas shipments were up almost 500,000 gallons due primarily to the heavy demand for kerosene during the harvest season.

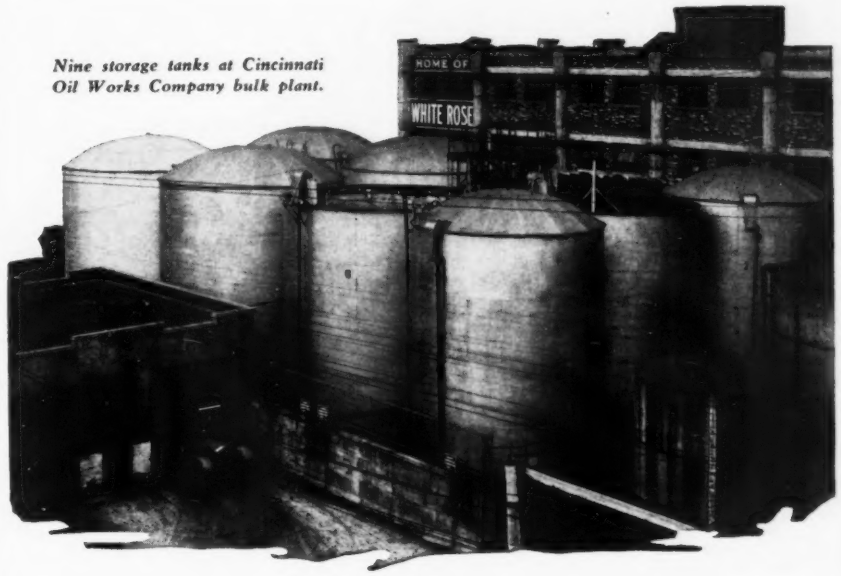
Stove distillate production was reduced 15.7 per cent while shipments increased 27.7 per cent. Stocks were reduced 0.2 per cent.

Gas oil production was off almost 300,000 gallons with shipments showing an increase of 2,600,000 gallons. Stocks were reduced 300,000 gallons. The reductions were confined to North Texas, West Texas and Louisiana-Arkansas. Kansas increased stocks 100,000 gallons and Oklahoma 800,000 gallons.

Fuel oil shipments jumped 11,100,000 gallons with Kansas and West Texas showing the greatest increase. Production was increased 2,200,000 gallons. Stocks were reduced 6,400,000 gallons.

WICHITA FALLS, July 29.—An inter-departmental safety contest is being staged by the Panhandle Refining Co. here. A safety trophy will be presented to the department showing the best percentage in decrease of lost time accidents for 1929 as compared with last year.

The refining department has had only 12 days lost time this year.



Nine storage tanks at Cincinnati Oil Works Company bulk plant.

Bulk Storage Tanks

Bulk storage facilities can be made to pay a profit as well as provide adequate stocks when and where you want them.

For the past four years the refinery price for motor gasoline has been an average of 1½ cents lower in April than in July. Why not take advantage of such regular price increases?

Evaporation losses, which tend to offset market increases, may be stopped by equipping tanks with Wiggins Roofs. The Wiggins Floating Roof is adapted to working tank conditions and the Breather-Roof used on standing storage.

Get our prices now on field erected tanks so you will be ready when the market swings down again. Our nearest office will give you quotations without obligation.

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New York - - 3145 Hudson Terminal Bldg.
Cleveland - - - 2206 Union Trust Bldg.
Dallas - - - - - 3339 Magnolia Bldg.
Atlanta - - - - - - 1050 Healey Bldg.
San Francisco - - - - 1060 Rialto Bldg.

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Here is a source of supply you can depend on. Make a note of it and place in your files for quick reference. Please send sample or specifications for prices.

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makes NEW NEIGHBORS *feel* FRIENDLY *toward you*

It's a great feeling . . . when you're traveling in a foreign country where nobody knows you or talks your language, to meet an old familiar face from the old home town!

And that's the kind of feeling that comes to a stranger when he sees a dealer selling and displaying an old familiar product that was advertised and sold in his old home town.

Newcomers in any community become customers of the dealer who carries *nationally advertised oil*—they may not know the dealer but they *know* the motor oil—they have confidence in it—they have friendship for it. National advertising for a product brings new business to the dealer who carries it.

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SINCLAIR OPALINE

REG. U.S. PAT. OFF.

is NATIONALLY ADVERTISED AS THE *Extra Service* MOTOR OIL

Exporters Buy 5,000,000 Gallons Of Gasoline in Mid-Continent

Staff Special

TULSA, July 29

PURCHASE of approximately five million gallons of gasoline for export from Mid-Continent refineries the week of July 22 to 29 furnished the biggest feature of the week in the refined oil market.

Domestic gasoline business was on a hand to mouth buying basis and competition from other districts caused Oklahoma refiners considerable worry. Prices at a few refineries were reduced during the week. Contract shipments were exceptionally good many refiners reported.

Natural gasoline prices fluctuated within a narrow range. Buying was spasmodic but the volume for the week was comparatively good.

Kerosene demand was light. Prices in Oklahoma were reduced slightly but were generally steady in other districts. Distillates showed no change. Gas oils and fuel oils were steady.

Gasolines

Two export buyers were in the market for gasolines. One buyer represented a foreign buyer in the capacity of broker. He bought 2,600,000 gallons of 60-62, 400 e. p. gasoline from Oklahoma, north Texas and Arkansas refiners.

This cargo makes the fifth this broker has handled for foreign accounts since last March. The buyer advises the broker how much gasoline he desires, the price he will pay and places a letter of credit in some bank in the Mid-Continent. The broker is paid a straight commission for his work. He buys the gasoline for the account of the foreign buyer, and the refiner draws on the letter of credit for his money. The foreign buyer pays the handling charges necessary to get the gasoline to a terminal and aboard a tanker.

This plan was tried for the first time last March and apparently proved successful. This was true especially as long as the refinery price was so close to the posted price at the Gulf. Since the refinery price has slipped the past few weeks to the point where exporters can buy and pay the freight to the Gulf and not lose money the plan may not prove as successful.

The other export buyer has his own terminal at the Gulf and was buying either to make up a cargo, to replace stocks taken from storage due to the movement of a cargo already sold, or for straight storage purposes at the Gulf. Prices paid for the goods were not made public but were understood to have ranged from 7.25 cents a gallon up to 7.75 cents, depending on the freight rates and the grade of gasoline bought.

These export purchases were taken by many of the trade as a criterion of a more active demand for export gasolines in the Mid-Continent. They apparently had little if any effect on the domestic market prior to close of business July 29.

Two or three refiners who had been quoting 58-60 U. S. Motor in Oklahoma at 8 cents a gallon late in the week reduced prices to a range of 7.50 to 7.75 cents. Another refiner who had been 7.50 cents a gallon advanced his quotation to 7.75 and then 7.875 cents a gallon due to a large volume of orders booked during the week.

Two or three other refiners intimated that unless some factor developed to give more strength to the market they would be forced to meet the competition from other territories and probably would reduce quotations early next week. The price range in the Mid-Continent was from 7 to 8 cents, Group 3 basis, but apparently the bulk of the goods offered at under 7.50 cents was not full specification U. S. Motor gasoline.

Jobbers continued to buy on the spot market only for immediate needs. Many of them apparently were anticipating a tank wagon reduction especially in view of the reduction made by the Standard Oil Co. of Ohio July 28. Some of them were also expecting a revision downward in crude prices.

With the two heaviest months of gasoline consumption just ahead many of the trade doubt there will be a tank wagon cut unless the refinery price gets so low in proportion that the cut would have to be made in self defense. As for the crude situation, the prevalent report is that the Prairie Oil & Gas Co. continues to take crude from storage, and as long as that situation prevails, many believe there will be no crude oil price reduction.

Sales managers generally, meanwhile, say the task of selling gasoline on the spot market the past several weeks has been one of the hardest they have encountered in many years.

Natural Gasolines

Several manufacturers reported inquiries for natural gasolines for shipment over August were good. A few orders were booked late in the week at prices slightly under the spot market.

Buying throughout the week was centered mostly in the grades AA and BB. One buyer obtained approximately 200 cars of grade AA from several manufacturers. This buying was not sufficient in volume, however, to have any material effect on prices.

Kerosenes

North Texas refiners continued to get a good volume of kerosene business from the Panhandle but other refining districts reported kerosene demand light for this season of the year. No new export inquiries were reported in the field for kerosenes.

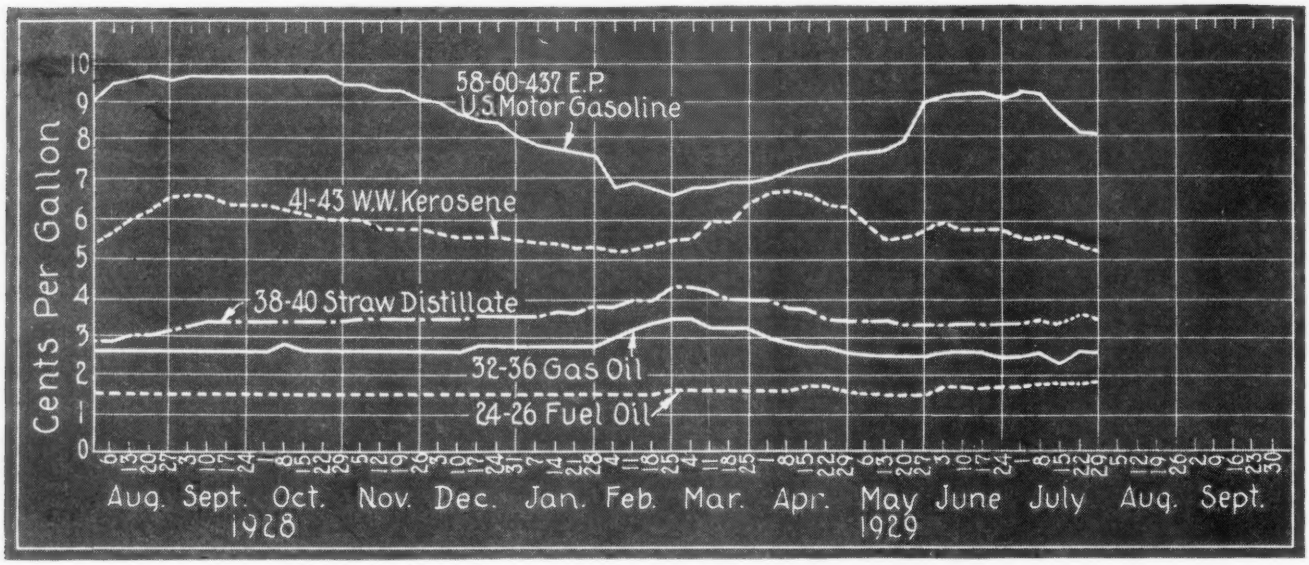
Distillates and Gas Oil

Demand for distillates and straw gas oil for tractor fuel was reported good by two or three refiners, but generally speaking these two commodities were extremely quiet. Prices were generally unchanged.

Fuel Oils

Little change was noted in fuel oil

Current Prices of Principal Mid-Continent Refined Products


Cents Per Gallon
58-60-437 E.P. U.S. Motor Gasoline
41-43 W.W. Kerosene
38-40 Straw Distillate
32-36 Gas Oil
24-26 Fuel Oil
Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept.
1928
1929

Prices shown are on Group 3 basis and extended to date shown in Refinery Market Tables Section of this issue

demand although several refiners reported inquiries for August shipment were comparatively good. Higher gravities were in slightly better demand in some quarters. This was taken as an indication buyers were obtaining the goods for storage until winter, the purchases having been to take advantage of the lower prices prevailing through the summer months.

Bright Stocks

Refiners making bright stocks reported demand was exceedingly good. Two or three refiners were completely out of the market. Another refiner has orders on his books which will keep him busy for the next month or more. One refiner this week sold three tank cars of 150-160 vis. 210 bright stock for 39.50 cents a gallon. The goods were for shipment to Canada.

A concession recently published leases to the Anglo-Ecuadorian Oilfields, Ltd., 1000 acres of oil lands at Ancon, Santa Helena peninsula on the west coast of Ecuador.

Crude exports to the United States from Ecuador for the first quarter of this year amounted to 207,230 barrels.

Phillips Buys Winters Oil Co. Stations

TULSA, July 29.—The Phillips Petroleum Co. of Bartlesville, which has been expanding rapidly in the retail gasoline marketing business the past two years, has bought the Winters Oil Co. of Kansas City, Kan., according to an announcement from the company's headquarters.

The sale included 35 service stations of which all but five are in greater Kansas City, and 10 bulk stations in that area. J. S. Winters was president of the company. No change in the personnel of the company would be made, it was announced.

The purchase fits in well with the Phillips policy of expansion and undoubtedly will add a large amount of gallonage to the company's sales in the Kansas City area.

NEW BERN, N. C.—The Coastal Oil Co. has been organized here to market petroleum products by J. V. Blades, N. F. Rowe and R. R. Tallman.

Venezuela Refinery Begins Cracking

CLEVELAND, July 29.—The first cracking unit of the Aruba refinery of the Pan American Petroleum & Transport Co. has begun operations, it is reported. Rapid progress is being made in finishing the refinery.

The plant is expected to have a crude capacity of about 110,000 barrels a day. It will handle the production of the Lago Oil & Transport Co. in the Lagunillas district of Venezuela. The first topping unit of the plant was started up early in May.

Puts Out Gasoline Tax Law Digest

TULSA, July 25.—A digest of gasoline tax laws by states has been compiled and put out in booklet form by the Western Petroleum Refiners Association, 607 Cosden Bldg., Tulsa.

The digest gives the amount of gasoline tax in effect now in the various states, the date it went into effect, what product or products are taxed, how the tax is paid, when and to whom, and other salient points.

A copy of it may be had by writing the association at the above address.

Prices 10 Years Ago
July 28, 1919

	Oklahoma	Penna.
58-60 U. S. Motor	18.50-18.75	20.25-21.00
80-84 Natural	23.50	.....
Kerosene (41-43 Okla.; 47 w. w. Pa.)	9.25-9.50	11.25
Fuel Oil (24-26 Okla.; 38-40 Pa.)	$0.80	4.75-5.00
Crude (Okla. 35-35.9)	$2.25	$4.00
Chicago tank wagon	.....	21.00c

Prices A Year Ago
July 30, 1928

	Oklahoma	Penna.
58-60 U. S. Motor	9.0250c	10.75-11.25c
Grade A Natural	9.75c	.....
Kerosene (Ok. 41-43; Pa. 47 w. w.)	5.25-5.50c	6.75-7.25c
Fuel Oil (Ok. 24-26; Pa. 36-40)	$0.65-$0.675	4.75-5.125c
Crude (Ok. 35-35.9)	$1.31	$3.10
Chicago tank wagon	.....	14.00c

Chicago Resale Market

Spot Sales of Gasoline Slow

Staff Special
CHICAGO, July 27

SPOT gasolines were still in the doldrums in the Chicago market as the week came to a close on July 27. While a few sellers reported they were doing a good business on U. S. Motor the majority of the trade said their spot sales continued disappointing for this season of the year.

This dullness in the spot market continued in spite of the fact that gasoline consumption throughout the middle west will probably set a new record this summer. Officials of several of the major distributing companies in this territory reported that business at their service station was showing from ten to 20 per cent increase over last year. Two companies said their business the first six months of 1929 would probably set an all time record. One refiner-distributor reported his sales of premium motor fuel this year showed an increase of about 45 per cent over last year.

Although it is hard to determine just exactly the cause of this quiet spot market the bulk of the local trade attributed it to about two conditions. One was the fact that so many jobbers in this territory were buying on contracts. It was pointed out that about this time in 1928 the spot market was advancing rapidly and jobbers were actively contracting to protect their margins. Most of these contracts were for a year's duration and have not yet expired. Nearly all refiners who move goods on contracts reported that their customers were ordering out their maximum quotas.

On the other hand, jobbers, who were buying on the spot market, appeared unwilling to buy more than their immediate requirements and consequently were in the market only for small lots. The feeling was still fairly general that no advance in spot market prices is likely at present and most jobbers were loath to fill their storage.

Nearly all sellers were watching the market closely for signs of a reaction to the reduction in tank wagon prices of gasoline and kerosene in Ohio on July 26. A number of sellers were uneasy about a similar reduction in the Standard of Indiana territory but it appeared unlikely that any reduction would be made unless price cutting became excessively prevalent. At the present time there apparently are fewer points than usual where gasoline prices are below normal.

One factor which somewhat offset the uneasiness of the past few weeks was the buying of close to 5,000,000 gallons of gasoline for export in the Mid-Continent. The bulk of the purchases were made in Oklahoma, Arkansas, and Texas.

Gasoline prices took another drop in the Chicago resale market early in the week and then held fairly steady at the new price levels. Oklahoma U. S. Motor was generally held at 7.75 to 8 cents on July 22 but was freely offered by marketers at 7.50 cents later in the week. Nearly all the Oklahoma refiners were getting at least 7.75 cents for Motor from the jobbing trade. Marketers said they could buy some Oklahoma Motor for resale purposes at 7.25 cents.

Somewhat lower prices were reported on West and North Texas Motor in Chicago during the week. Sales were reported as low as 7.125 cents f.o.b. Group 3 to jobbers, and at 6.875 and 7 cents for resale. However, a close investigation showed that a good portion of this low priced goods was not up to U. S. Motor specifications in one way or another. Some of it was considerably off color and some was rejected on account of bad odor.

The prices quoted on full specification North and West Texas Motor by the majority of the marketers ranged mostly from 7.375 to 7.50 cents, f.o.b. Group 3 basis. An occasional sale of full specification goods was reported direct to jobbers at 7.25 cents.

Higher gravity gasolines continued to experience their usual off-season dullness and prices were down about 0.125 cent during the week.

Somewhat divergent reports were heard on kerosene activity although no one reported any unusual business. Some sellers reported an exceptionally dull market while others said they had no kick coming on the amount of goods sold. The bulk of sellers asked 5.25 or 5.375 cents for 41-43 w.w. kerosene but quite a few sales were reported at 5.125 and 5.50 cents.

The majority of the trade expressed themselves as well satisfied with their industrial gas and fuel oil business so far this year. Several of them said it had been considerably above normal but had fallen off somewhat this week. Very little change was noted in asking prices. There was practically no "distress" goods reported and sellers generally were of the opinion that the prices now in effect would remain for some time.

Occasional shower periods are likely in Standard of Indiana territory next week. Temperatures will fall slightly in the early days of the week and become warmer towards the close.

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MOTOR OIL
White Rose
GASOLINE

YOU will make money if you handle these nationally advertised brands.

All grades of lubricating oils and greases.

The National Refining Co.
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FARM
PUMPS
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at prices you can afford to install them at.

We manufacture all types of farm gasoline and kerosene outfits to meet every one's need and purse.

Write for our catalogue and prices on farm pumps and pump and tank outfits.

Type "A" shown

$15.00
Complete

Dept. D, VOLCKER MFG. CO.
Huntington Indiana

Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, F. O. B. refinery except where $ is shown

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

Comparative Prices of 58-60 U. S. Motor Gasoline, 437 E. P., Group 3 and Point of Origin, to Jobbers Only

In Effect July 29

	Price F.O.B. Group 3	*Price F.O.B. Point of Origin*	*If for Particular Destination*
Oklahoma	7.9574 (Wt. Avg.)	7.9574 (Wt. Avg.)	
Kansas	7.75-800		S. O. Neb. & Ind. Ter., etc.
Kansas		8.2321 (Wt. Avg.)	Kansas only.
North Texas	7.375-7.75	7.50-7.75	
West Texas	7.25-7.625	7.25-7.625	
Louisiana-Ark.	7.50-7.75		Mich., Ohio & Indiana.
Louisiana-Ark.		8.25	State or differential haul.
Indiana-Illinois	7.75-8.00	*	S. O. Ind. territory except Detroit and vicinity. For Ohio on delivered basis only.

*Shipments made from E. Chicago, Ind., and Wood River, Ill., according to conditions and freight rates; no prices F.O.B. point of origin can be given.

Weighted Average Prices

OKLAHOMA

	July 29		July 22		July 15	
	No. of cars	Price	No. of cars	Price	No. of cars	Price
58-60 U. S. Motor, 437 e. p.	44	7.9574	102	8.0104	79	8.4794
60-62 437 e. p. gasoline	4	7.6875	2	8.1875	No sales reported	
60-62 400 e. p. gasoline	2	8.0000	4	8.4688	3	8.8333
64-66 375 e. p. gasoline	1	8.7500	1	8.0000	1	9.2500

The weighted averages above reflect the tendency on the part of several Oklahoma refiners to meet competition at prices under the quotations of a majority of plants.

Most of the refiners reporting kept their quotations at 8 cents throughout the week for 58-60 U. S. Motor, but a few refiners, both those reporting and the non-reporting ones, sold at prices ranging from 7.50 cents up. Spot demand was only fair, although refiners generally reported contract movement was good.

KANSAS

	July 29		July 22		July 15	
	No. of cars	Price	No. of cars	Price	No. of cars	Price
58-60 U. S. Motor, 437 e. p.	7	8.2321	5	8.2500	3	8.7500

Kansas refiners had a comparatively fair volume of business during the past week because of the harvest season. Prices were generally in line with Oklahoma with the freight differential taken into consideration.

GASOLINE AND NAPHTHA

OKLAHOMA	Prices July 29	Prices July 22	Prices July 15
48-50 450 e.p. naphtha	7.75 – 8.00	7.75 – 8.00	8.25 – 8.75
50-52 450 e.p. naphtha	7.75 – 8.00	7.75 – 8.00	8.25 – 8.75
56-58 450 e.p. gasoline	7.50 – 7.75	7.75 – 7.875	8.125 – 8.25
58-60 450 e.p. gasoline	7.75 – 7.875	7.75 – 7.875	8.125 – 8.375
64-66 390 e.p. gasoline	8.25 – 8.75	8.50 – 8.75	9.00 – 9.375
68-70 350-360 e.p. gasoline	9.00	9.00 – 9.25	9.50 – 9.625

†Prices nominal ††Only one refiner quoting *Quotations only

CHICAGO RESALE (F. o. b. Group 3, altho goods may originate elsewhere)

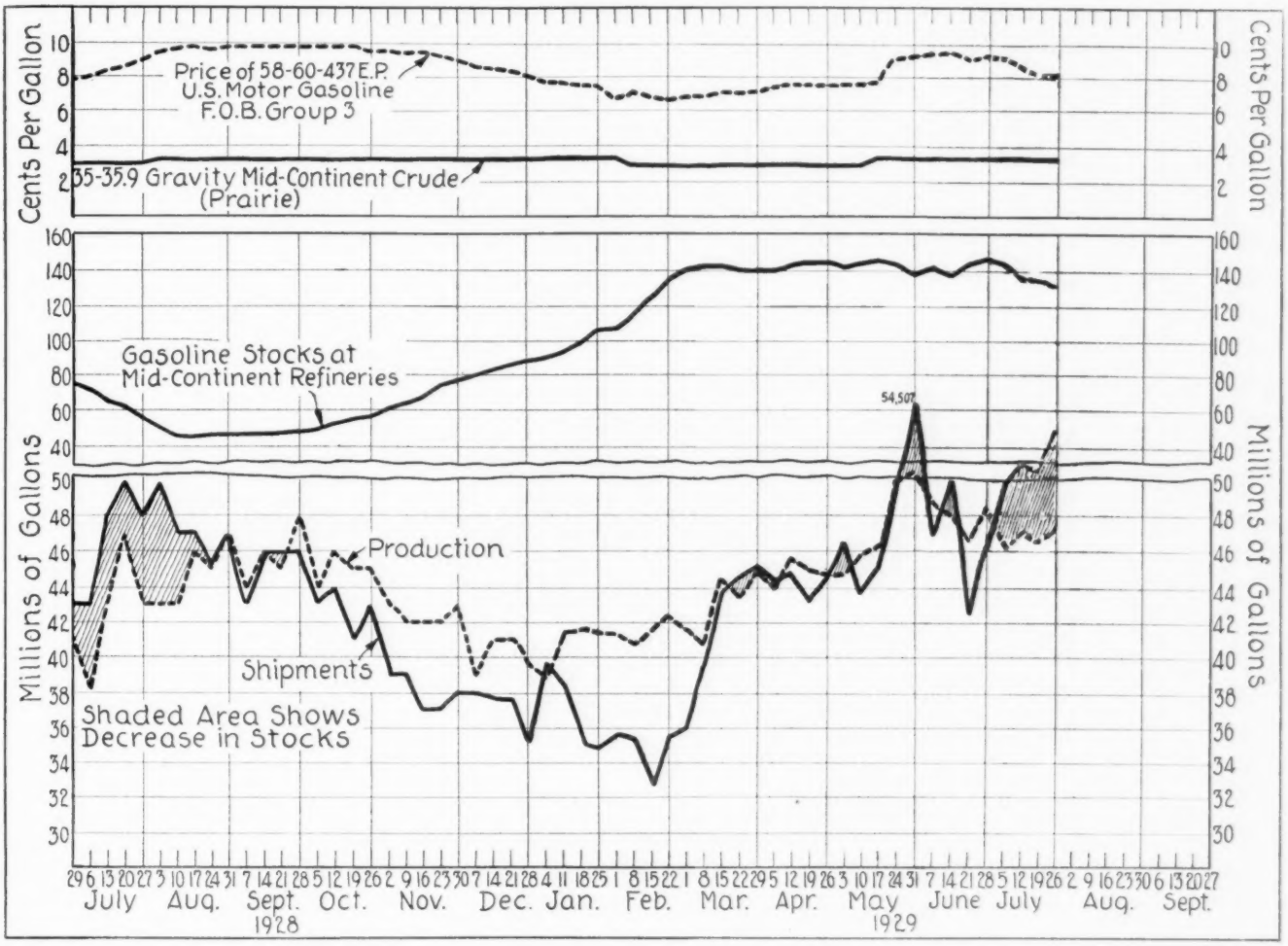
	Prices July 29	Prices July 22	Prices July 15
58-60 U.S. Motor, 437 e.p.	7.375– 8.00	7.50 – 8.00	7.875– 8.50
60-62 437 e.p. gasoline	7.50 – 8.125	7.75 – 8.125	8.25 – 8.625
60-62 400 e.p. gasoline	7.875– 8.25	8.00 – 8.25	8.50 – 8.75
64-66 375 e.p. gasoline	8.125– 8.75	8.25 – 8.75	8.875– 9.25

(Continued on Page 106)

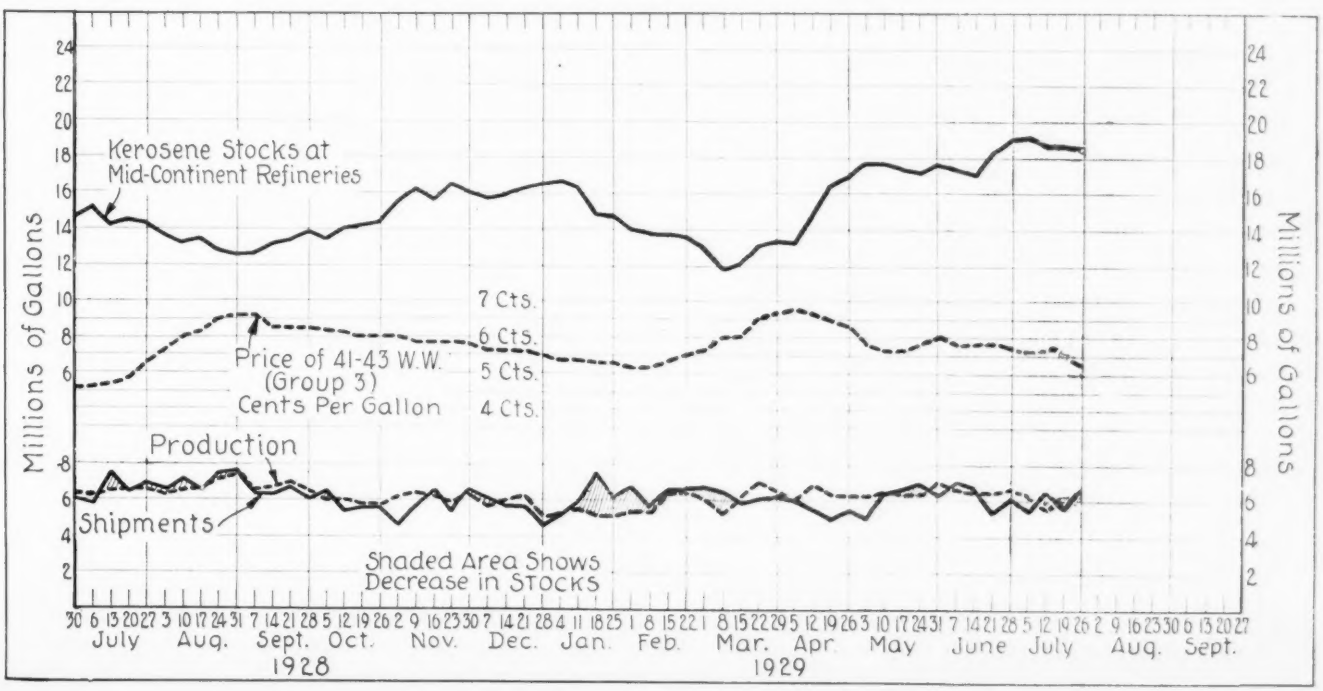
**Represents Both Sales and Quotations.

Barometer of Mid-Continent Refinery Market—Week Ending July 26

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, from Reports Made by 93 Plants to National Petroleum News


Cents Per Gallon
Price of 58-60-437 E.P. U.S. Motor Gasoline F.O.B. Group 3
35-35.9 Gravity Mid-Continent Crude (Prairie)
Gasoline Stocks at Mid-Continent Refineries
54,507
Millions of Gallons
Production
Shipments
Shaded Area Shows Decrease in Stocks
July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept.
1928
1929

Prices shown above are extended to date shown in Refinery Market and Crude tables in Market section of this issue and stocks, shipments and Production are extended to date as shown in the table on page 98



Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, F. O. B. refinery except where $ is shown

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

PENNSYLVANIA

	Prices July 29	Prices July 22	Prices July 15
52-54 Naphtha	9.25 – 9.75	9.25 – 9.75	9.25 – 9.75
54-56 Naphtha	9.50 –10.00	9.25 –10.00	9.25 –10.00
58-60 U.S. Motor 437 e.p.	10.00 –10.25	10.00 –10.50	10.25 –10.75
60-62 400-410 e.p. gasoline	10.25 –11.00	10.25 –11.00	10.25 –11.25
64-66 390 e.p. gasoline	10.50 –11.25	10.50 –11.25	10.50 –11.50
68-70 Str-run gas 350-360 e.p.	10.75 –12.00	10.75 –12.00	10.75 –12.50

OHIO (Quotations of S. O. Ohio. 4c state tax to be added.)

U. S. Motor Gasoline

Ohio, delivery at any point	11.00	12.00	12.00

KANSAS (F. O. B. refinery Kansas destination)

60-62 400 e.p. gasoline	8.50 – 8.75	8.75	9.25 – 9.50
64-66 375 e.p. gasoline	8.875– 9.00	9.00	9.50 – 9.75

NORTH TEXAS

48-52 450 e.p. naphtha	7.50	7.50	8.00 – 8.25
56-58 450 e.p. gasoline	7.50	7.50	7.75 – 8.25
58-60 450 e.p. gasoline	7.50	7.50	7.75 – 8.25
58-60 U.S. Motor 437 e.p.	7.50 – 7.75	7.625– 7.875	8.00 – 8.375
60-62 400 e.p. gasoline	7.75 – 8.00	7.875– 8.125	8.25 – 8.75
64-66 390 e.p. gasoline	8.25	8.25	8.50 – 9.00
64-66 375 e.p. gasoline	8.375	8.375	8.625– 9.00
68-70 350-360 e.p. gasoline	8.625– 8.75	8.625– 8.75	9.00 – 9.375

****WEST TEXAS (F.o.b. West Texas refinery, for unrestricted shipment)**

50-52 naphtha	7.50	7.50	7.75 – 8.00
56-58 437 e.p. gasoline	7.25 – 7.375	7.50	7.75 – 8.25
58-60 437 e.p. gasoline	7.25 – 7.625	7.50 – 8.00	8.00 – 8.25

NORTH LOUISIANA (N. La., Ark., and Miss. destination)

61-63 390 e.p. gasoline	8.25	8.50	9.00

ARKANSAS (Ark., N. La. and Miss. destination)

58-60 U.S. Motor 437 e.p.	.....	8.50	9.00

CALIFORNIA (3c tax to be added to California gasoline prices if used in state.)

54-58 U.S. Motor 437 e.p.	7.75 –10.25	7.75 –10.00	7.75 –10.00
58-61 375-400 e.p. gasoline	10.00 –11.00	9.00 –11.00	10.00 –11.00
42-45 Engine Distillate 445-480 e.p.	7.50 – 8.50	7.50 – 8.50	7.50 – 8.50

NATURAL GASOLINE

(Note: End point of all grades, not over 375 F. Corrosion test adopted Oct. 1, 1927; A.S.T.M. Method D130-27T; doctor test, July 2, 1928.)

OKLAHOMA

Grade AA, 80-87.9, 90% Recovery	**6.25 – 6.50	6.25 – 6.50	6.375– 6.50
Grade A, 72-79.9, 90% Recovery	**6.25 – 6.50	6.25 – 6.50	6.375– 6.50
Grade BB, 84-92, 85% Recovery	6.00	5.875– 6.00	*5.75
Grade B, 76-83.9, 85% Recovery	6.00	5.875– 6.00	*5.75
Grade C, 80-90, 78% Recovery	6.00	5.875– 6.00	*5.75

NORTH TEXAS (F. o. b. Breckenridge)

Grade AA, 80-87.9, 90% Recovery	**6.25 – 6.50	6.25 – 6.50	6.375– 6.50
Grade A, 72-79.9, 90% Recovery	**6.25 – 6.50	6.25 – 6.50	6.375– 6.50
Grade BB, 84-92, 85% Recovery	6.00	5.875– 6.00	*5.75
Grade B, 76-83.9, 85% Recovery	6.00	5.875– 6.00	*5.75
Grade C, 80-90, 78% Recovery	6.00	5.875– 6.00	*5.75

NORTH LOUISIANA (F. o. b. Monroe District)

Grade AA	†6.50	†6.75	†6.75
Grade BB	†6.25	†6.00	†6.00
Grade C	†6.25	†6.00	†6.00

CALIFORNIA

75-85, 375-390 e.p. blend	8.50 – 9.00	8.50 – 9.00	8.75 – 9.50

Prices nominal ††Only one refiner quoting *Quotations only

BURNING OILS

PENNSYLVANIA

	Prices July 29	Prices July 22	Prices July 15
45 w.w. kerosene	6.125– 6.25	6.25 – 6.50	6.25 – 6.75
46 w.w. kerosene	6.50 – 6.75	6.50 – 7.00	6.50 – 7.00
47 w.w. kerosene	6.75 – 7.25	6.75 – 7.25	6.875– 7.50
300 mineral seal	7.25 – 7.375	7.25 – 7.375	7.25 – 7.375

CHICAGO RESALE (F. o. b. Group 3, altho goods may originate elsewhere)

41-43 w.w. kerosene	5.125– 5.50	5.125– 5.50	5.375– 5.625

OKLAHOMA

41-43 w.w. kerosene	5.125– 5.375	5.375– 5.50	5.50 – 5.75
42-44 w.w. kerosene	5.625– 5.75	6.00	6.00 – 6.25

KANSAS (F. O. B. refinery Kansas destination)

41-43 w.w. kerosene	5.75 – 6.00	6.00	6.00 – 6.25
42-44 w.w. kerosene	6.00	6.25 – 6.50	6.25 – 6.50

NORTH TEXAS

40-42 w.w. kerosene	5.00	5.00	5.00
41-43 w.w. kerosene	5.00 – 5.375	5.125– 5.25	5.00 – 5.375

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

41-43 w.w. kerosene	5.75 – 6.00	6.00	6.125
42-44 w.w. kerosene	6.00 – 6.25	6.25	6.375

ARKANSAS (Ark., N. La. and Miss. destination)

41-43 kerosene	5.75 – 6.00	6.00	6.125
42-44 kerosene	6.00 – 6.25	6.25	6.375

CALIFORNIA

38-40 w.w. kerosene	5.25 – 5.75	5.25 – 6.00	5.50 – 6.50

NEUTRAL OIL

PENNSYLVANIA

Vis.	(Viscosity at 70°F.)		
200 No. 3 Assoc. Filt.	27.00 –29.00	28.00 –29.00	28.00 –29.00
180 No. 3 Assoc. Filt.	24.00 –26.00	24.00 –26.00	24.00 –26.00
150 No. 3 Assoc. Filt.	19.50 –21.50	20.00 –21.50	20.00 –21.50
	(Non Viscous)		
34 Grav. 330-340 Flash	7.50 – 8.00	7.50 – 8.00	7.50 – 8.00

****OKLAHOMA**

Vis. Color	(Viscosity at 100°F.)		
100—No. 2	6.00 – 7.00	6.00 – 7.00	6.00 – 7.00
150—No. 3	7.50 – 8.25	7.50 – 8.25	7.50 – 8.25
150—No. 4	6.75 – 7.50	6.75 – 7.50	6.75 – 7.50
180—No. 3	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
180—No. 4	8.75 – 9.25	8.75 – 9.25	8.75 – 9.25
180—No. 5	8.50 – 9.00	8.50 – 9.00	8.50 – 9.00
200—No. 3	9.50 –11.00	9.50 –11.00	9.50 –11.00
200—No. 4	9.00 –10.25	9.00 –10.25	9.00 –10.25
200—No. 5	8.75 – 9.50	8.75 – 9.50	8.75 – 9.50
220—No. 3	12.50 –13.50	12.50 –13.50	12.50 –13.50
220—No. 4	12.25 –12.50	12.25 –12.50	12.25 –12.50
220—No. 5	11.50 –12.00	11.50 –12.00	11.50 –12.00
240—No. 3	13.00 –13.50	13.00 –13.50	13.00 –13.50
240—No. 4	12.00 –13.00	12.00 –13.00	12.00 –13.00
240—No. 5	11.00 –13.00	11.00 –13.00	11.00 –13.00
280—No. 3	14.00 –16.00	14.00 –16.00	14.00 –16.00
280—No. 4	13.00 –15.00	13.00 –15.00	13.00 –15.00
280—No. 5	12.00 –14.00	12.00 –14.00	12.00 –14.00
300—No. 5-6	16.00 –17.00	16.00 –17.00	16.00 –17.00

****Represents both sales and quotations.**

Refinery Markets Wax, Lubricants, Heavy Oil

Prices given below are in cents per gallon, F. O. B. refinery except where $ is shown

(For quick reference to Refinery Prices, get the OIL PRICE HANDBOOK, published annually)

GULF COASTAL

Vis.	Color	Prices July 29	Prices July 22	Prices July 15
		(Viscosity at 100°F., pour test 0)		
100	No. 2 Pale	6.75 – 7.25	6.75 – 7.25	6.75 – 7.25
200	No. 3 Pale	9.25 – 9.75	9.25 – 9.75	9.25 – 9.75
300	No. 3 Pale	10.50 –11.00	10.50 –11.00	10.50 –11.00
500	No. 3½ Pale	12.00 –12.50	12.00 –12.50	12.00 –12.50
750	No. 4 Pale	13.00 –13.50	13.25 –13.75	13.25 –13.75
200	No. 5½ Red Oil	8.50 – 9.00	8.50 – 9.00	8.50 – 9.00
300	No. 5½ Red Oil	9.75 –10.25	9.75 –10.25	9.75 –10.25
500	No. 6 Red Oil	11.00 –11.50	11.00 –11.50	11.00 –11.50
750	No. 6 Red Oil	12.00 –12.50	12.00 –12.50	12.00 –12.50

CALIFORNIA

Vis.	Color		(Viscosity at 100°F.)	
100	No. 3	9.50 –10.00	9.50 –10.00	9.50 –10.00
200	No. 3	11.50	11.50	11.50
300	No. 3	13.00	13.00	13.00
450	No. 3	15.50	15.50	15.50
550	No. 3	16.50	16.50	16.50
600	No. 3	17.00	17.00	17.00
200	No. 5	11.00	11.00	11.00
300	No. 5	12.00	12.00	12.00
400	No. 5	14.00	14.00	14.00
500	No. 5	15.00	15.00	15.00
600	No. 5	16.00	16.00	16.00
700	No. 7	18.00	18.00	18.00

CYLINDER STOCKS

**OKLAHOMA

190-200D Vis. at 210° Brt. St.	37.00 –41.00	37.00 –41.00	37.00 –41.00
150-160D Vis. at 210° Brt. St.	36.00 –38.00	36.00 –37.00	36.00 –37.00
150-160E Vis. 210° Brt. St.	29.00 –33.00	29.00 –33.00	29.00 –33.00
600 St. Ref. Olive Green	16.00 –19.00	16.00 –19.00	14.00 –19.00
600 St. Ref. Dark Green	14.00 –16.00	14.00 –16.00	14.00 –16.00
Black Oil	5.00	5.00	5.00

PENNSYLVANIA (A. S. T. M. Tests)

600 Steam Refined, filterable	27.00 –29.00	27.00 –29.00	28.00 –30.00
650 Steam Refined	35.00 –37.00	35.00 –37.00	35.00 –37.00
600 Flash	37.00 –41.00	37.00 –41.00	37.00 –41.00
625 Flash	39.00 –45.00	39.00 –45.00	39.00 –45.00
600 Warren E	34.50 –36.50	34.50 –36.50	35.00 –36.50
600 Oil City E	32.50 –35.00	32.50 –35.00	34.00 –36.00
600 D Filtered	38.50 –40.00	38.50 –40.00	38.50 –40.00
Cold Test Stock, 40-50p. p., 140-150 vis. at 210° 540-550 flash, No. 8 color	52.00 –53.00	52.00 –53.00	52.00 –53.00
40-50 p.p., 140-150 vis. at 210°, 540-550 flash, No. 6-6½ color diluted	51.00 –52.00	51.00 –52.00	51.00 –52.00

WAX

PENNSYLVANIA (Per pound, New York)

122-124 white crude scale, a.m.p.	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00
124-126 white crude scale, a.m.p.	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00

OKLAHOMA

**124-126 White Crude Scale, a. m. p.	2.50 – 2.625	2.50 – 2.75	2.50 – 2.75

CALIFORNIA

White crude scale, per pound, ton lots, a.m.p.	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50

DISTILLATE, GAS AND FUEL OIL

PENNSYLVANIA (For outside Pittsburgh district)

36-40 fuel oil	4.375– 5.00	4.375– 5.00	4.50 – 5.00
30-34 fuel oil	4.25 – 4.375	4.25 – 4.375	4.25 – 4.50
28-32 fuel oil	4.25 – 4.375	4.25 – 4.375	4.25 – 4.50

CHICAGO RESALE (F. o. b. Group 3, altho goods may originate elsewhere)

	Prices July 29	Prices July 22	Prices July 15
38-40 straw distillate	3.25 – 3.625	3.25 – 3.50	3.25 – 3.50
32-36 ordinary dark gas oil	2.375– 2.50	2.375– 2.50	2.375– 2.50
32-36 dark zero gas oil	2.50 – 2.75	2.50 – 2.75	2.50 – 2.75
32-36 straw zero gas oil	2.625– 2.875	2.625– 2.875	2.625– 2.875
28-30 zero fuel oil	$0.925–$0.95	$0.925–$0.95	$0.925–$0.95
28-30 fuel oil	$0.875–$0.90	$0.875–$0.90	$0.875–$0.90
24-26 fuel oil	$0.675–$0.725	$0.675–$0.725	$0.675–$0.725
18-22 fuel oil, low sulfur	$0.55 –$0.60	$0.55 –$0.60	$0.55 –$0.60
18-22 fuel oil, high sulfur	$0.50 –$0.55	$0.50 –$0.55	$0.50 –$0.55

OKLAHOMA

38-40 straw distillate	†3.375– 3.75	†3.50 – 3.75	†3.375– 3.50
36-38 straw distillate	†3.125– 3.375	†3.25	†3.125– 3.25
32-36 straw gas oil	2.50 – 2.75	2.50 – 2.625	2.50 – 2.625
32-36 dark gas oil	2.50	2.375– 2.50	2.375– 2.50
32-36 straw zero gas oil	2.625– 2.75	2.625– 2.75	2.625– 2.75
28-30 zero fuel oil	$0.925– 0.975	$0.925– 0.95	$0.925– 0.95
28-30 fuel oil (in bbls.)	$0.875– 0.925	$0.875– 0.925	$0.875– 0.925
26-28 fuel oil (in bbls.)	$0.775– 0.85	$0.775– 0.85	$0.775– 0.85
24-26 fuel oil (in bbls.)	$0.70 – 0.825	$0.70 – 0.825	$0.70 – 0.825
22-26 fuel oil (in bbls.)	$0.60 – 0.65	$0.60 – 0.65	$0.60 – 0.65
18-22 fuel oil (in bbls.)	$0.525– 0.575	$0.525– 0.575	$0.525– 0.575
16-18 fuel oil (in bbls.)	$0.475– 0.55	$0.475– 0.525	$0.475– 0.525
14-16 fuel oil (in bbls.)	$0.475– 0.525	$0.475– 0.525	$0.475– 0.525

KANSAS (F. O. B. refinery Kansas destination)

38-40 straw distillate	3.50 – 3.625	3.375– 3.625	3.375– 3.625
36-38 straw distillate	3.25 – 3.50	3.25 – 3.50	3.25 – 3.50
32-36 gas oil	2.50 – 2.75	2.50 – 2.75	2.50 – 2.75
24-26 fuel oil	$0.75 – 0.775	$0.75 – 0.775	$0.75 – 0.775
18-22 fuel oil	$0.625– 0.70	$0.625– 0.70	$0.625– 0.70
10-14 fuel oil	$0.50 – 0.575	$0.50 – 0.575	$0.50 – 0.575

NORTH TEXAS

38-40 straw distillate	3.25 – 3.50	3.25 – 3.50	3.25 – 3.375
32-36 gas oil, cracked	2.25 – 2.375	2.25 – 2.375	2.25 – 2.375
32-36 St. reduced gas oil	2.375– 2.50	2.375– 2.50	2.375– 2.50
24-26 fuel oil (in bbls.)	$0.65 – 0.70	$0.65 – 0.70	$0.65 – 0.70
20-24 fuel oil	$0.60 – 0.70	$0.60 – 0.70	$0.65 – 0.70

**W EST TEXAS (F.o.b. West Texas refinery, for unrestricted shipment)

34-38 gas oil	2.25 – 2.375	2.25 – 2.375	2.25 – 2.375
30-32 gas oil	2.125– 2.25	2.00 – 2.125	2.00 – 2.125
18-22 fuel oil	$0.375– 0.45	$0.375– 0.45	$0.375– 0.45

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

32-36 gas oil, dark	2.50 – 2.75	2.50 – 2.75	2.50 – 2.75
32-36 gas oil, straw	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00
14-16 fuel oil (in bbls.)	$0.65 – 0.75	0.65 – 0.75	$0.70 – 0.80

ARKANSAS (Ark., N. La. and Miss. destination)

32-36 gas oil, straw	3.00	3.00	3.00
32-36 gas oil	3.00	3.00	3.00
28-30 gas oil	2.50 – 2.75	2.50 – 2.75	2.50 – 2.75
14-16 fuel oil	$0.65 – 0.75	$0.65 – 0.75	$0.70 – 0.80

CALIFORNIA (F. o. b. San Joaquin Valley. At San Francisco, 4c per bbl. more)

14-18 fuel oil (per bbl.)	$0.50 –$0.60	$0.525–$0.60	$0.55 –$0.65
14-18 Bunker oil (per bbl.)	$0.70 –$0.75	$0.70 –$0.75	$0.70 –$0.75
30-34 gas oil (per bbl.)	$0.85 –$1.05	$0.85 –$1.05	$0.85 –$1.05
27 Plus Diesel oil (per bbl.)	$0.85 –$1.00	$0.95 –$1.00	$0.95 –$1.00

PETROLATUMS

PENNSYLVANIA (In barrels, carload lots, f. o. b. refinery. In tank cars ⅝c to ¾c per pound less.) Two refiners quoting.

Snow White	8.375– 8.50	8.375– 8.50	8.375– 8.50
Lily White	7.375– 7.625	7.375– 7.625	7.375– 7.625
Cream White	6.375– 6.625	6.375– 6.625	6.375– 6.625
Light Amber	3.625	3.625	3.625
Amber	3.375	3.375	3.375
Red	3.125	3.125	3.125

PETROLEUM COKE

**OKLAHOMA

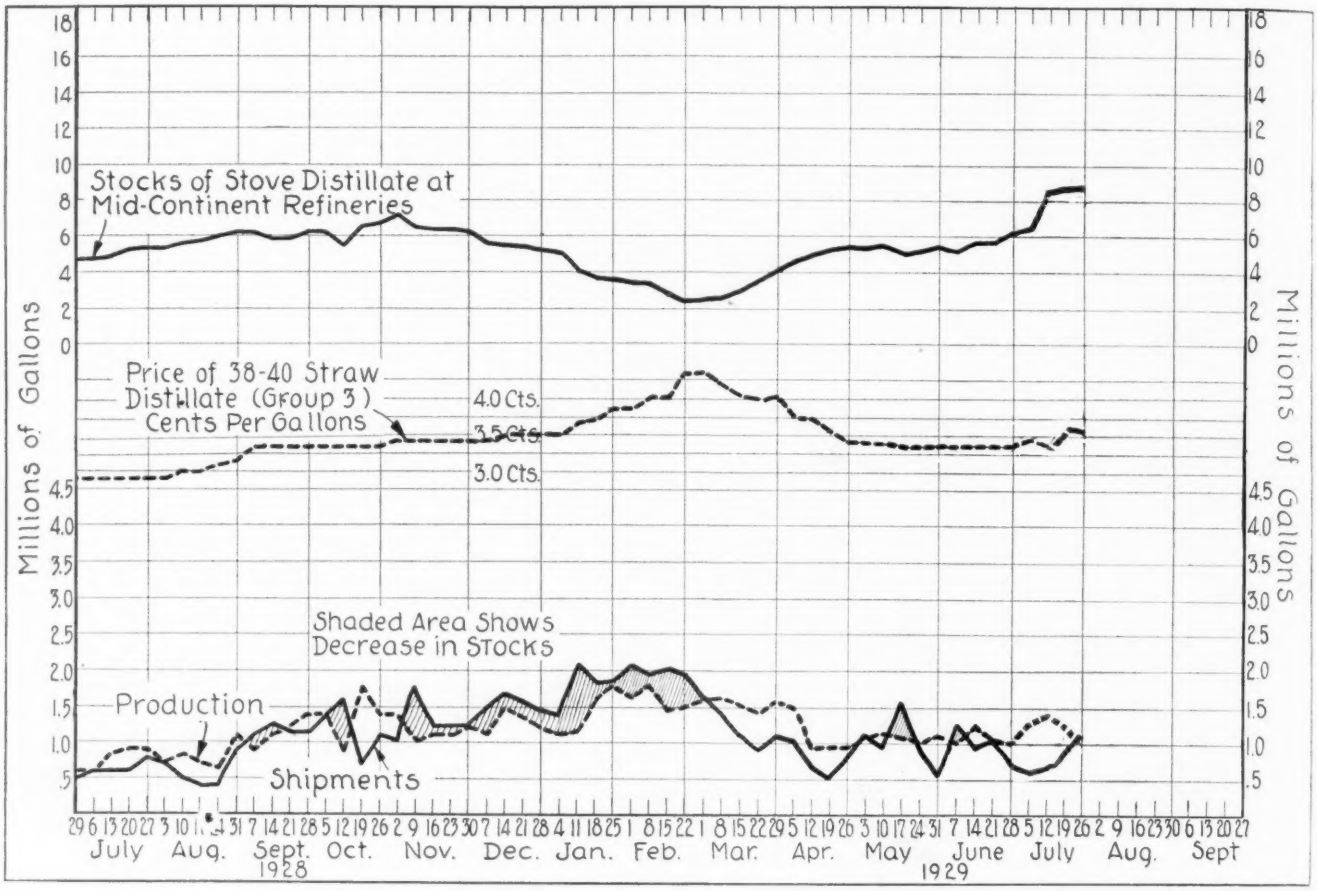
(Per ton in car lots)

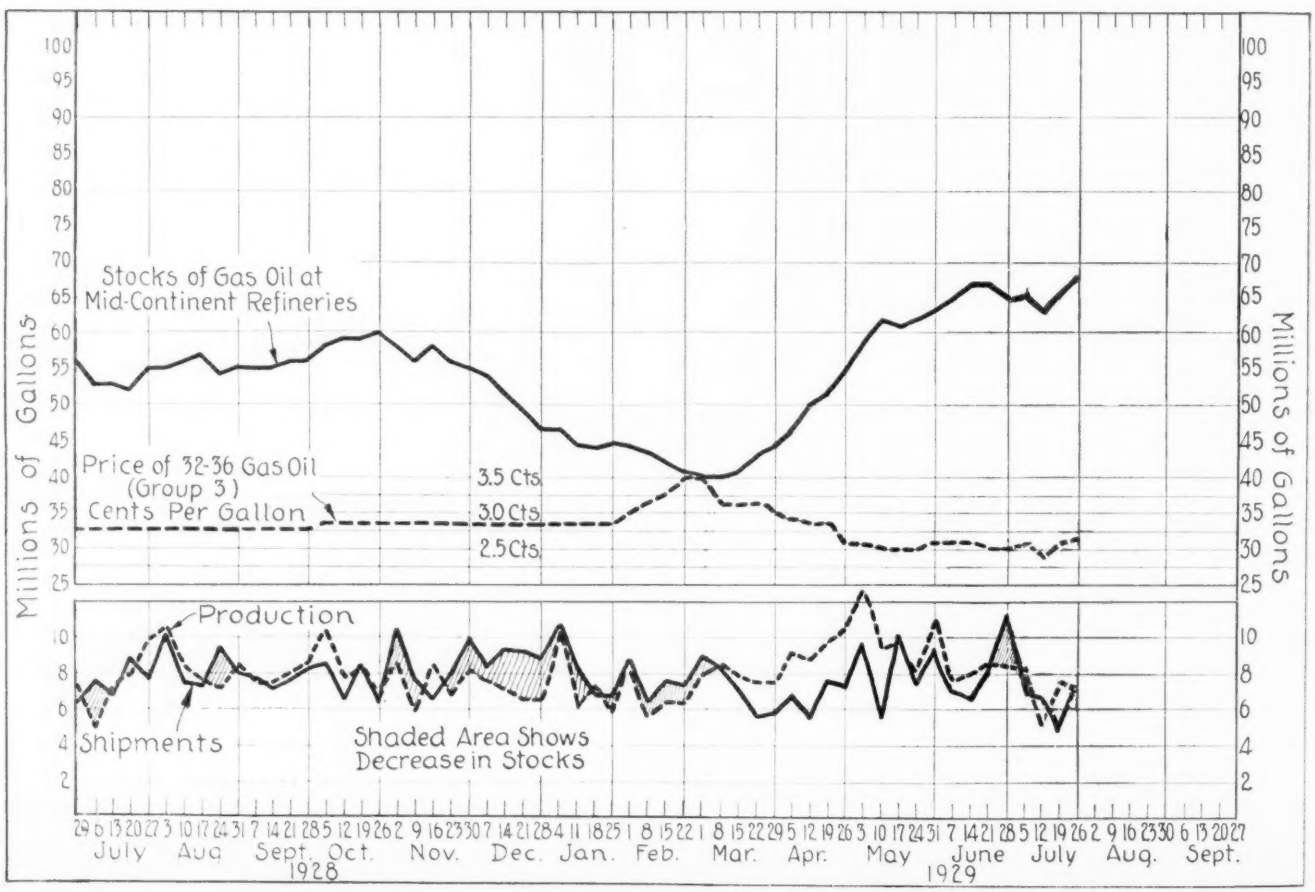
Lump	$4.50 – 5.00	$4.50 – 5.00	$4.50 – 5.00
Still run	$3.00	$3.00	$3.00
Breeze	$2.00	$2.00	$2.00

†Prices Nominal ††Only One Refiner Quoting *Quotations only **Represents both sales and quotations

Barometer of Mid-Continent Refinery Market—Week Ending July 26

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, from Reports Made by 93 Plants to National Petroleum News


Stocks of Stove Distillate at Mid-Continent Refineries
Price of 38-40 Straw Distillate (Group 3) Cents Per Gallons
4.0 Cts.
3.5 Cts.
3.0 Cts.
Shaded Area Shows Decrease in Stocks
Production
Shipments
Millions of Gallons
July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept
1928
1929


Stocks of Gas Oil at Mid-Continent Refineries
Price of 32-36 Gas Oil (Group 3) Cents Per Gallon
3.5 Cts.
3.0 Cts.
2.5 Cts.
Production
Shipments
Shaded Area Shows Decrease in Stocks
Millions of Gallons
July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept.
1928
1929

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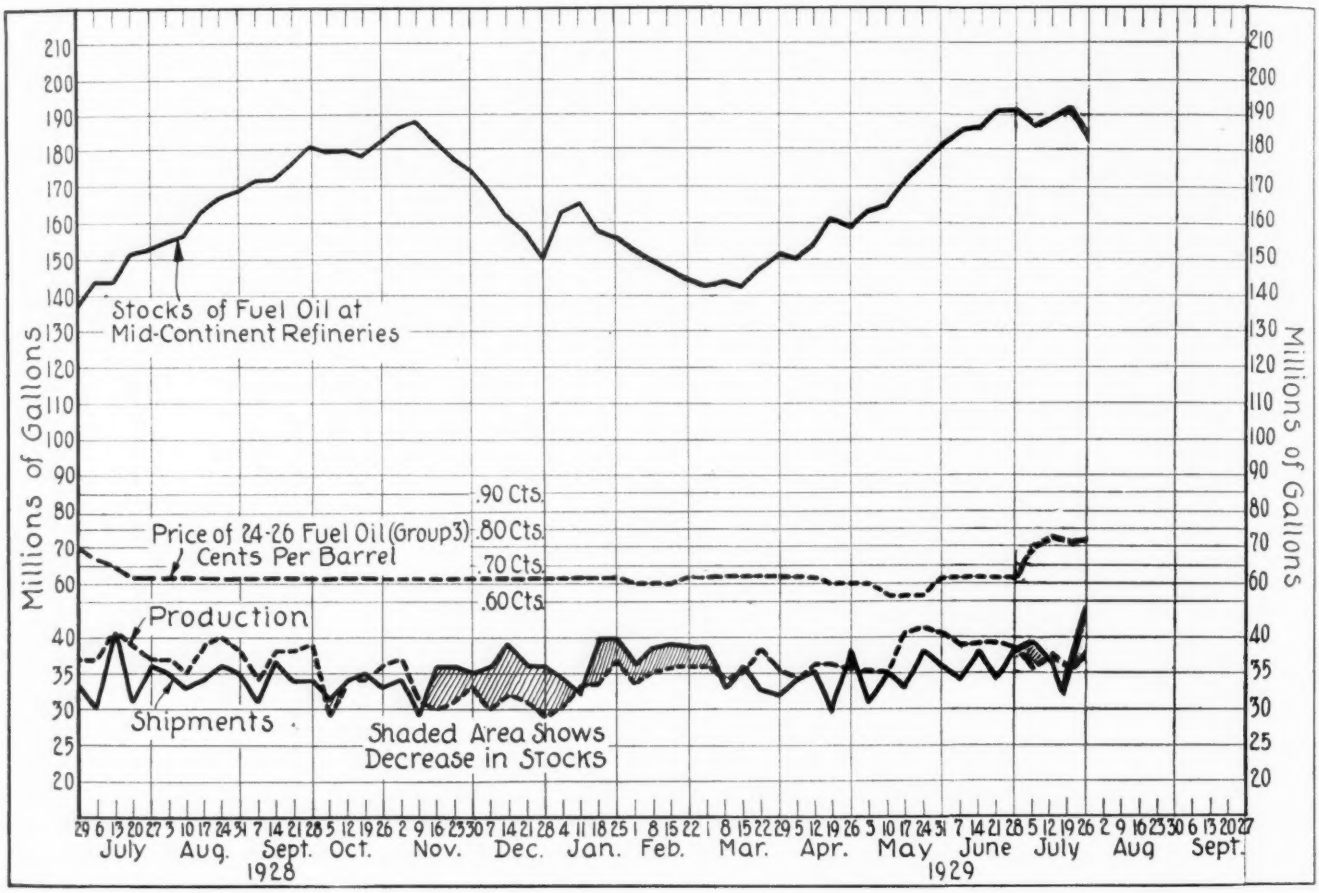
Charleston, W.Va.
Norfolk, Va.
Atlanta, Ga.
Tampa, Fla.
Miami, Fla.
Pensacola, Fla.
Tulsa, Okla.
Beaumont, Tex.

Barometer of Mid-Continent Refinery Market—Week Ending July 26

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, from Reports Made by 93 Plants to National Petroleum News


Millions of Gallons
Millions of Gallons
Stocks of Fuel Oil at Mid-Continent Refineries
Price of 24-26 Fuel Oil (Group 3) Cents Per Barrel
.90 Cts.
.80 Cts.
.70 Cts.
.60 Cts.
Production
Shipments
Shaded Area Shows Decrease in Stocks
July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug Sept.
1928
1929

California Refinery Market

No Improvement in Gasoline Business

LOS ANGELES, July 25

CALIFORNIA market conditions showed little indication of a let-up in the general depression that has existed for the past month. Few inquiries and spot sales were reported although a number of dealers felt that export and domestic business would be good if refiners could see their way to release some of the accumulating stocks at a figure lower than that now quoted.

One buyer was making an attempt to purchase a cargo of U. S. Motor for export at the low price of 6.50 cents per gallon but at latest reports had had no success. Another stated that he thought gasoline for export could be bought for 6.75 cents, but that no sales had been made at that figure.

Rates on petroleum products shipped from Southern California to Arizona and New Mexico were ordered reduced by the Interstate Commerce Commission on July 23. These reductions will cut the rates to Arizona from 80 cents to 70 cents per hundred pounds and from 93 cents to 80 cents on New Mexico shipments.

This reduction in rates has had no apparent effect on out of state shipments up to the present time but several shippers stated that they expected that they would be able to penetrate Arizona and New Mexico against Mid-Continent competition to a greater degree than under the old schedules.

Refinery products showed very little change from last week although a number of commodities were quoted a shade under the previous quotations.

Out of state gasoline was moving at from 7.75 to 8.25 cents, with one supplier reporting that a little could be bought as low as 7.50 cents. In state U. S. Motor quotations ranged from 9.50 to 10.25 cents, without tax.

Natural gasoline showed some activity with 100,000 gallons reported sold at 8.75 cents. Some distress goods was on the market for as low as 8.50 cents.

The kerosene market continued on an even trend during the past week with quotations ranging from 5.25 to 6 cents. Two cars were reported shipped to Arizona for 6 cents although this was of very good quality. Some was sold at 5.50 cents and a little at 5.25 cents. This latter quantity was a cheaper grade of 38-40 w.w. kerosene.

Fuel oils were a shade under last week's quotations as several spot sales by Independents showed that this commodity could be bought for as low as 50 cents per barrel.

Independent refiners, who have been releasing a large quantity of their gasoline stocks to major companies, find that their fuel stocks are taxing their storage facilities and therefore are selling it at the low prices mentioned. Competing major companies

have also caused the price of fuel oil to drop.

A number of sales were reported for diesel oils, of 27 plus quality, during the past week. A large quantity is used for smudging citrus groves and consumers now are preparing for the coming winter by placing their orders early.

Other refinery products showed no change from the figures quoted last week.

Pennsylvania Market

Spot Gasoline Prices Steady

CLEVELAND, July 27.—Gasoline tank wagon price advance in upper New York State helped western Pennsylvania refiners to get more money on their contracts but they still are facing stiff competition in the spot market.

The decline in gasoline prices in Ohio caused a cut in the net back to refiners who are moving their gasoline from the lower oil country into Ohio.

Movement of gasoline in the spot market is reported to be fair at steady prices.

Recent large purchases of kerosene by seaboard refiners for storage has taken considerable surplus off the market. Prices have not rallied since the purchases but there is little distress goods about. Rumors of sales of 45 water white under 6.125 cents cannot be confirmed.

There has been little industrial buying of fuel oil and less buying by refiners for cracking but the movement as a whole is described as fair.

Neutrals are reported to be quiet. Steam refined stocks are being freely offered in some quarters but other refiners report demand is becoming brisk.

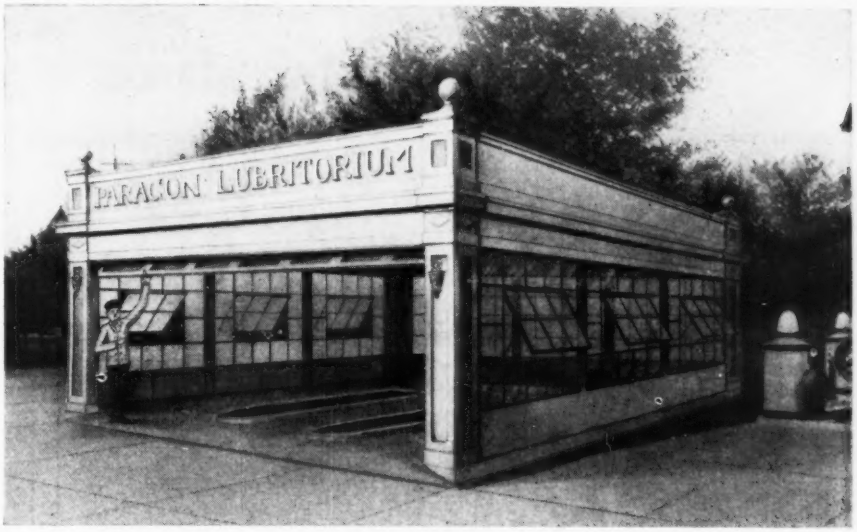
Bright stocks are still in heavy demand and some makers are sold up into September. Prices have been stationary.

Foreign demand for paraffin wax is increasing and some refiners are looking for higher prices shortly. The heavy buying season is near at hand, they report. Many refiners in spite of heavy stocks are content to hold their output for the expected improvement.

C. J. Dexter Retires From Bennett-Dexter

PHILADELPHIA, July 29.—The tank car and cargo oil brokerage business of the Bennett-Dexter Oil Co., Widener Bldg., here has been taken over entirely by Frank O. Bennett and John D. Bennett. C. Joseph Dexter, a former partner, has retired.

The policy of the company is not changed in any way, according to Frank O. Bennett.



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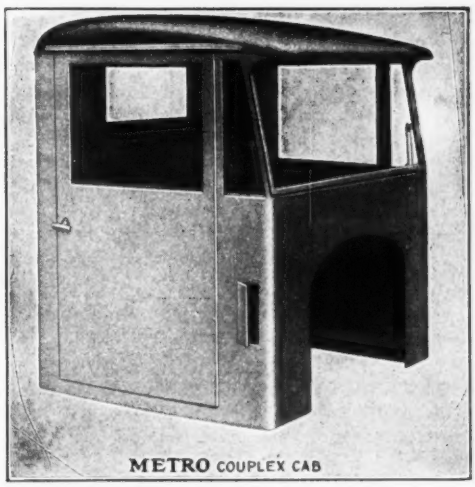

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NEW YORK CLEVELAND PHILADELPHIA

New York Domestic Market

Spot Gasoline Prices Lower

Staff Special

NEW YORK, July 27

WITH four companies quoting U. S. Motor gasoline under 10 cents, prices at New York, moved downward the past week, losing 0.50 cent over quotations a week ago. Prices at other points, with the exception of New England, were unchanged.

Ten cents was the general quotation one week ago although some goods moved lower. One company was quoting 9.50 cents and another 9.75 cents. July 24, two other companies quoted 9.75 cents, and another July 27, went to 9.50 cents.

One of these companies who has sold goods at 9.50 cents, formerly quoted 11 cents. Another company who had quoted 11 cents at several points along the seaboard, lowered prices at all points except New York a week ago, and this past week reduced his quotation to 10 cents at New York.

These reductions came in spite of the fact that excellent motoring weather has prevailed along the Atlantic coast, and that both tank wagon and service station gasoline was advanced 1 cent in Upper New York state. The reason the trade gave for the reduction was a slow spot market. Shipments for spot have fallen off for the past two or three weeks. One seller estimated that spot consumption for New York as a whole, was 1,500,000 gallons lower monthly than the normal figure.

This has, of course, left the seller relying on his contracts to keep storage down to a minimum and, in several instances, that movement has been reported as "only fair." Some of these contracts were from a 0.25 to 0.75 of a cent lower than the spot market, the trade reported, and, in the case of the supplier who moved a majority of his stuff spot, prices were lowered to meet this competition.

Portland gasoline came down to 11.50 cents, minimum delivered, as the general quotation, which was 0.25 of a cent lower than the week previous. At other points the market was unchanged although suppliers continued to report the market slow. A Philadelphia refiner reported that he had heard of shading in only one instance in his district and that was at Pittsburgh. Baltimore refiners said that there had been a few instances of shading although the majority of refiners there were obtaining 10 cents. No refiners were willing to sell into Providence or Boston under 11 cents delivered.

California gasoline has been moving fair all sellers report, although the price at New York has narrowed to 10 cents flat in line with Baltimore and Philadelphia.

The recent tank wagon raise will do little, the trade believes, toward helping the situation. They believe it will stimulate shipments to some extent as the jobber will have a larger margin to work on, but it is not expected to have any effect on the spot tank car price. The new tank wagon price is 16 cents exclusive of 2 cents state tax. The raise was posted July 24 by the Beacon Oil Co., and met later that same day by the Standard Oil Co., of New York. It does not apply to the Metropolitan district.

Suppliers of both California and U. S. Motor gasoline have reported receiving inquiries for over August but as a rule they are not making quotations. One seller stated his price for the period would be 9.50 cents for U. S. Motor.

Kerosene has been inactive and prices were unchanged. At New York and Philadelphia sales were being made at 7.75 to 8 cents, with the bulk moving at the lower price.

Gulf Coast Market

Gasoline Sold Below Export Posting

Staff Special

NEW YORK, July 27

DURING the last week in July, foreign buyers circulated two inquiries in the Gulf market. One cargo was reported to have been sold, although confirmation could not be obtained.

This unconfirmed sale constituted the feature for the week, inasmuch as the price was lower by almost a cent per gallon, than that posted by the Export Petroleum Association. The New York trade reported that an English buyer, through a Texas broker, had purchased 100,000 barrels of 60-62, 400 e. p. gasoline, at 8.625 cents, f.o.b. the Gulf. It was to be shipped during August, according to the report.

The association's posting on that commodity, f.o.b. Gulf oil terminals, is 9.50 cents, 0.875 of a cent higher than the sale price.

The other inquiry was from a Belgian account and was being circulated among the eastern trade. The buyer sought approximately 70,000 barrels of U. S. Motor, 64-66, 375 e. p. gasoline and 41-43 p. w. kerosene for shipment in September. The business was to be quoted on a c.i.f. basis. One supplier felt that the business would probably be closed early in the first week in August.

Prices on light oils were unchanged although heavier goods were being quoted lower. Suppliers have reduced prices on Bunker C fuel from $0.05 to $0.10 cents per barrel. At Texas and Louisiana terminals Grade C Bunker oil in barrels was being quoted from $0.90 to $0.95 cents in comparison with $0.95 to $1.00 the week previous. In cargoes $0.70 to $0.80 was the quotation where a week ago most sellers were quoting from $0.75 to $0.85 cents. At Tampico, Grade C with taxes paid, was also being quoted $0.90 to $0.95. A week ago it was being quoted the same as the barrel price at Texas and Louisiana terminals.

Virtually all the bunker oil being shipped from the Gulf is going for export as high tanker rates practically prohibit Gulf competition on the New York export market. There is a 2.5-cent handling charge at each end for coastwise movement, which, combined with a 42-cent tanker rate makes the lowest price at New York $1.07, figuring on $0.70 cents per barrel at the Gulf. At New York the present quotation is well pegged at $1.05, 2 cents lower. The demand for bunker oil at the Gulf is generally reported fair.

Prices for domestic shipment from the Gulf were unchanged over a week ago. Gasoline was reported slow at 8 cents, and one source reported that price might be bettered with a firm bid. Kerosene was inactive at 6.75 to 7 cents and gas oil at 4 cents.

Tanker rates held at last week's levels with one exception—dirty bottoms from the Gulf to North Atlantic ports were quoted at $0.42 to $0.50 cents, a decrease in the low range of $0.05 cents per barrel. Clean boats were unchanged at $0.40 to $0.42 cents.

Wax Market

Buyers More Active

NEW YORK, July 27.—A more active week with sales to back up their opinions, has caused wax sellers at New York to view the market more optimistically than they have for several weeks. Quotations were unchanged with one exception, and sellers felt that there was a better undertone to the market.

Foreign buyers made several purchases of white crude scale, the largest of which was 1,000 tons of 124-126 grade, for shipment in August and September to the United Kingdom from the Gulf. The cargo was closed with the cost, insurance and freight paid, based on 2.875 cents, New York.

Quotations on white crude scale were from 2.75 to 3 cents with the higher price the general quotation for forward shipment. Most suppliers were quoting not later than the last of August, and several reported they were out of the market until September. The trade generally feels that higher prices will prevail then.

Yellow crude scale was inactive but prices were unchanged over a week ago. Refiners seem unwilling to sell under 2.625 cents, the present low of the New York market. Quotations ranged up to 2.875 cents.

Buyers were fairly active in the fully refined market. Most sales moved domestic although one seller disposed of 100 tons of 125-127 A.m.p. grade, to a British concern. The transaction was made c.i.f., New York, with 4 cents the basis. That is the low of the market at present, although quotations range up to 4.25 cents. The domestic movement has been largely to wax paper manufacturers who have purchased small lots of 135-137 A.m.p. grade. They have paid from 6.25 to 6.50 cents although one seller was quoting lower.

Gulf Coast Lubes Quiet

HOUSTON, July 29.—Gulf Coastal lubricant markets were quiet the past week but are holding their own at recently stiffened prices. Summer motoring demand has been largely responsible for jobber business on the spot market. Export inquiries are lacking.

DAYTON, July 26.—United Circuit Court of Appeals here has ordered dismissed the bill of complaint in the infringement of patent suit brought by the Wayne Co., Fort Wayne, Ind., against the Dayton Pump & Manufacturing Co. The Wayne company charged infringement of its Kern patent.

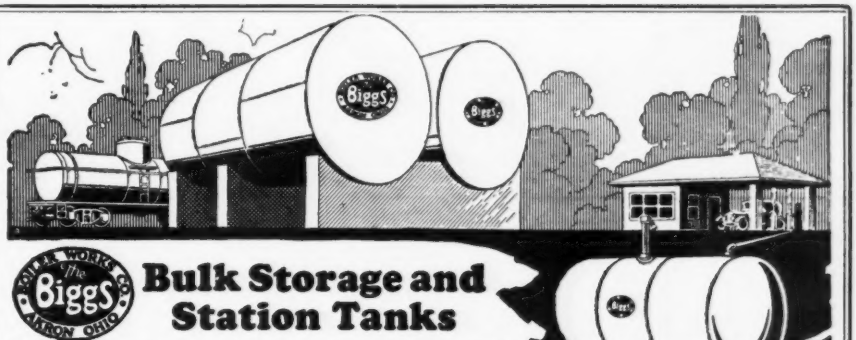
Skilled Supervision
Guarantees the Quality of Gulf Products

COASTAL AND PARAFFINE CRUDES
GASOLINE — LUBRICATING OILS
NAPHTHA — GAS — OILS
WAX — PETROLEUM COKE
CYLINDER—ENGINE—CORDAGE

Gulf Refining Company

General Sales Offices
PITTSBURGH, PA.

District Sales Offices
New York, Boston, Philadelphia, Louisville, Atlanta, Houston, New Orleans



The Biggs Boiler Works Co. Akron Ohio
Bulk Storage and Station Tanks

Forty years successful experience; plant fully equipped for fabricating plate up to 1½" thick.
Pressure Stills for Cracking Process - Fractionating Towers - Dephlegmating Towers, Bubble Towers - Heat Exchangers - Agitators - Steam Stills - Crude Stills - Condenser Boxes, Run Down Tanks - Blending Tanks - Hemispherical Tanks - Blow Cases - Acid Tanks, Compounding Kettles - Storage Tanks to 80,000 Barrels - Smoke Stacks and Breechings, etc.
THE BIGGS BOILER WORKS COMPANY, Buchtel and Bank Streets, AKRON, OHIO
Eastern Sales Office: 50 Church St., New York *Western Sales Office:* 53 South Dearborn St., Chicago

Complete Seaboard Market

(Export Markets for whole year given in OIL PRICE HANDBOOK. Each volume carries refinery, tank wagon, crude and export markets—complete for the whole year)

Eastern Domestic Market

(Prices for tank car lots, f. o. b. refinery or seaboard terminal, representing majority of quotations.)

U. S. MOTOR GASOLINE	July 29	July 22	July 15
New York harbor	9.50 –10.00	10.00	10.00
Portland district	*11.50	**11.50–11.75	**11.50–11.75
Boston district	*11.00	*11.00	*11.00
Providence district	*11.00	*11.00	*11.00
Philadelphia district	10.00	10.00	10.00
Baltimore district	10.00	10.00	10.00
Norfolk district	10.00	10.00	10.00
Charleston district	10.00	10.00	10.00
Savannah district	10.00	10.00	10.00
Jacksonville district	10.00	10.00	10.00
CALIFORNIA, U. S. MOTOR GASOLINE			
New York habor	10.00	10.00	10.00 –10.50
Philadelphia district	10.00	10.00	10.00
Baltimore district	10.00	10.00	10.00
WATER WHITE KEROSENE			
New York harbor	7.75 – 8.00	7.75 – 8.00	7.75 – 8.00
Philadelphia district	7.75 – 8.00	7.75 – 8.00	7.75 – 8.00
Baltimore district	8.00	8.00	8.00
Gas OIL: 28-34 Gravity			
New York harbor	4.75	4.75	4.75 – 5.00
Boston district	4.75	4.75	4.75 – 5.00
FURNACE OIL: 36-40 Gravity			
New York habor	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
Boston district	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
GRADE C BUNKER OIL†			
New York harbor	$1.05	$1.05	$1.05
Boston district	$1.05	$1.05	$1.05
DIESEL OIL			
New York harbor	$2.00 –$2.10	$2.00 –$2.10	$2.00 –$2.10
MEDICINAL OILS, RUSSIAN			
885-890 s.g. 325-330 vis.	$0.75 – 0.80	$0.75 – 0.80	$0.75 – 0.80
870-875 s.g. 150-155 vis.	$0.65 – 0.70	$0.65 – 0.70	$0.65 – 0.70

Note: Above gasoline prices do not include inspection tax levied in some states
*Minimum delivered. **Delivered prices. †Lighterage 5c per bbl. additional

New York Export Market

(Lubricating oils are per gal. in bbls.)

	July 29	July 22	July 15
CYLINDER OILS (Pennsylvania Products)			
Bright stock, dark	57.00 –59.00	57.00	57.00
600 D filtered	45.00	45.00	45.00 –48.00
600 Warren E filtered	42.00 –43.00	42.00 –43.00	42.00 –43.00
600 s.r. unfiltered	33.00 –35.00	33.00 –35.00	35.00 –37.00
650 s.r. unfiltered	39.00 –42.00	39.00 –42.00	41.00 –43.00
600 flash, s.r.	45.00	42.00 –45.00	44.00 –47.00
630 flash, s.r.	46.00 –48.00	46.00 –48.00	48.00 –49.00
RED ENGINE OILS (Vis. 100°)			
300 vis. No. 6½ color	20.00 –21.00	20.00 –21.00	20.00 –21.00
250 vis. No. 6 color	18.00 –20.00	18.00 –20.00	18.00 –20.00
200 vis. No. 6 color	16.00 –17.00	15.00 –16.00	15.00 –16.00
PALE ENGINE OILS (Vis. 100°)			
230 vis. No. 3¾ color	20.00 –21.00	18.00 –20.00	18.00 –20.00
180 vis. No. 3¼ color	17.00	17.00	17.00
100 vis. No. 2¼ color	16.00	16.00	16.00
MOTOR OILS (Vis. 100°)			
600 vis. No. 7 color	33.00 –34.00	33.00	33.00
500 vis. No. 6½ color	31.00	31.00	31.00
400 vis. No. 7¼ color	30.00	30.00	30.00
300 vis. No. 6 color	23.00 –25.00	23.00 –25.00	23.00 –25.00
200 vis. No. 6 color	20.00 –22.00	20.00 –22.00	20.00 –22.00
MEDICINAL OILS			
875-885 s.g.	$0.80	$0.80	$0.80
865-870 s.g.	$0.70	$0.70	$0.70
WAXES (In cents per pound, f.a.s. carload lots)			
WHITE CRUDE SCALE (In barrels)			
122-124 A.m.p.	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00
124-126 A.m.p.	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00
FULLY REFINED (In burlap bags)			
123-125 A.m.p. Phila	4.00 – 4.25	4.00 – 4.25	3.875
125-127 A.m.p.	4.00 – 4.25	4.00 – 4.25	4.00 – 4.125
128-130 A.m.p.	4.50	4.25 – 4.50	4.25 – 4.50
130-132 A.m.p.	5.25 – 5.50	5.25 – 5.50	5.50 – 5.75
133-135 A.m.p.	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
135-137 A.m.p.	6.25 – 6.50	6.25 – 6.50	6.50
YELLOW CRUDE SCALE			
124-126 A.m.p.	2.625– 2.875	2.625– 2.875	2.625– 2.875

Gulf Export Market

(Prices are f. o. b. Gulf oil terminals in Texas and Louisiana, shipments of 20,000 bbls. or more unless otherwise noted and for export shipment only).

GASOLINE	July 29	July 22	July 15
U. S. Motor	8.50	8.50	8.50
60-62, 400 e.p.	9.50	9.50	9.50
61-63, 390 e.p.	9.75	9.75	9.75
64-66, 375 e.p.	10.00	10.00	10.00
U. S. Motor, cases (cargoes)	$1.85	$1.85	$1.85
64-66, cases (cargoes)	$2.00	$2.00	$2.00
KEROSENE			
44 water white	8.00	8.00	8.00
41-43 prime white	7.00	7.00	7.00
Water white, cases (cargoes)	$1.80	$1.80	$1.80
Prime white, cases (cargoes)	$1.70	$1.70	$1.70
DOMESTIC GAS & BUNKER OILS			
*26-30 translucent gas oil	4.00	4.00	4.00
*30 plus translucent gas oil	4.00 – 4.125	4.00 – 4.125	4.00 – 4.125
Grade C bunker oil	$0.90 –$0.95	$0.95 –$1.00	$0.95 –$1.00
Grade C bunker oil, cargoes	$0.70 –$0.80	$0.75 – 0.85	$0.75 – 0.85
*Less than ½ of 1% sulphur.			
MEXICAN CRUDE AND BUNKER OILS (F. O. B. Steamer, Tampico)			
Heavy Panuco crude taxes to be paid	$0.60 –$0.65	$0.60 –$0.65	$0.60 –$0.65
Grade C bunker oil for bunkering purposes, taxes paid	$0.90 –$0.95	$0.95 –$1.00	$0.95 –$1.00
SOUTH TEXAS LUBRICATING OILS, (Viscosity at 100° F. (cold test 0) (Tanker, f. o. b. Houston)			
100 vis. No. 2 unfiltered pale	7.00	7.00	7.00
200 vis. No. 3 unfiltered pale	8.50 – 9.50	8.50 – 9.50	8.50 – 9.50
300 vis. No. 3 unfiltered pale	9.50 –10.50	9.50 –10.50	9.50 –10.50
500 vis. No 3½ unfiltered pale	11.00 –12.00	11.00 –12.00	11.00 –12.00
750 vis. No. 4 unfiltered pale	13.50 –14.00	13.50 –14.00	13.50 –14.00
1200 vis. No. 5 unfiltered pale	16.50 –17.00	16.50 –17.00	16.50 –17.00
200 vis. No. 5-6 red oil	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
300 vis. No. 5-6 red oil	8.50 – 9.00	8.50 – 9.00	8.50 – 9.00
500 vis. No. 5-6 red oil	10.00 –10.50	10.00 –10.50	10.00 –10.50
750 vis. No. 5-6 red oil	12.00 –12.50	12.00 –12.50	12.00 –12.50
1200 vis. No. 5-6 red oil	16.50 –17.00	16.50 –17.00	16.50 –17.00

Gulf Domestic Market

(Prices are f.o.b. Gulf oil terminals in Texas and Louisiana in shipments of 20,000 bbls. or more, representing sellers' opinions, for domestic shipment only).

	July 29	July 22	July 15
U. S. Motor gasoline	8.00	8.00	8.25 – 8.50
41-43 w.w. kerosene	6.75 – 7.00	6.75 – 7.00	7.00
*26-32 translucent gas oil	4.00	4.00	4.00
*Less than ½ of 1% sulfur.			

Pacific Export Market

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

	July 29	July 22	July 15
Gasoline, U. S. Motor, 53-55 Gravity	7.00 – 7.50	7.00 – 7.50	7.00 – 7.50
Gasoline, U. S. Motor-blends and special cuts	7.50 –10.00	7.50 –10.00	7.50 –10.00
Gas Oil, 30-34, per barrel	$0.95 –$1.05	$0.95 –$1.05	$0.95 –$1.05
Diesel Oil, 27 plus, per barrel	$0.875–$1.00	$0.875–$1.00	$0.875–$1.00
Bunker oil, 14-18, per barrel	$0.70 –$0.85	$0.70 –$0.85	$0.70 –$0.85
Fuel oil, 14-18 per barrel	$0.60 –$0.85	$0.60 –$0.85	$0.60 –$0.85
Kerosene, 38-40 w.w., 125-150 flash, per gal.	5.75 – 6.25	5.75 – 6.25	5.75 – 6.25
Cased Goods			
Gasoline, U. S. Motor	$1.75 –$1.85	$1.75 –$1.85	$1.75 –$1.85
Kerosene, 38-40 w.w., 125, 150 flash	$1.45 –$1.50	$1.45 –$1.50	$1.45 –$1.50

Tanker Rates

(Approximate tanker freight rates to Continental ports, in shillings per ton of 2240 pounds, British sterling; to American ports, cents per barrel.)

	July 29	
	Crude &/or Fuel	Refined Oil &/or Spirits
Calif. to U. K. or Continental ports*	35	38-40
Gulf to U. K. or Continental ports*	23	23-25
North Atlantic to U. K. or Continental ports*	20	21-23
Calif. to North Atlantic ports (not E. of N. Y.)	$1.00-$1.10	$1.05-$1.10
Gulf to North Atlantic ports (not E. of N. Y.)**	42-45	40-42

*Continental ports in the range between Bordeaux and Hamburg, both inclusive.
**Venezuela loading 1c per bbl. additional. For Tampico loading 5c per bbl. additional.

Above—*A—Flexible metal tube; B — Celinol sealing layer; C — Jacket, made of hard twisted yarn woven tightly to prevent absorption of water and oil. Pre-shrunk to prevent loosening*

The Gasoline test tells the story of the superiority of Goodrich Gasoline Hose. See below

A simple test that shows why Goodrich hose stays gasoline-tight

THE metal tubing of gasoline hose cannot be made gasoline-tight. For that reason a need has existed for a sealing layer to surround the metal tubing, that would not dissolve in gasoline. This need has been responsible for one of Goodrich's most important contributions to hose manufacture—Celinol.

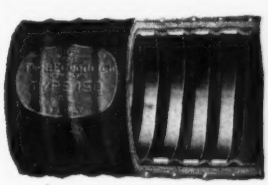
Where the sealing layer of ordinary hose is quickly dissolved by gasoline, becomes pulpy and loses its elasticity and gasoline-tightness, Celinol is immune to the solvent effects of gasoline, and keeps its tensile strength fifty percent longer.

The effect of this improvement on hose replacement costs is readily apparent.

The superiority of Celinol is so marked that we want you to prove it to yourself by this simple test. Take a small section of Celinol sealing layer and put it in a bottle filled with gasoline. Take a small section of ordinary rubber and put it in another bottle. Leave both samples immersed for sixty days. At the end of that time you will see that Celinol still retains its toughness and elasticity whereas the other rubber has become gummy, has lost its resiliency, and has discolored the gasoline.

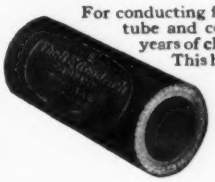
We will gladly send a small sample of Goodrich Celinol so that you can make this test yourself. Write to The B. F. Goodrich Rubber Co., Akron, O., or send the coupon below.

Oil Suction and Discharge Hose



Scientifically balanced combination of wire, fabric and oil-proof rubber. Also made with reinforced cover and ends for sea-loading service. Dock records of leading oil companies show this hose outlasts other makes 25% to 50%.

Goodrich Distillate Hose



For conducting fuel oil. The oil proof tube and cover are the result of years of chemical research work. This hose contains no metal. Light and flexible. Furnished in long lengths. Sizes—1", 1¼", 1½", and 2".

The Goodrich Guarantee

Every hose is guaranteed against any defect in material or workmanship for 24 months — a copy of the guarantee is attached to every length before it leaves the factory.

Goodrich

THE B. F. GOODRICH RUBBER CO., N.P.N. 7
Akron, Ohio

Gentlemen: Please send me a small sample of Celinol sealing layer so that I may test its superiority myself.

Name .....

Firm .....

Address .....

Tank Wagon Service Station Markets for Gasoline and Kerosene

(OIL PRICE HANDBOOK has t.w. and s.s. markets for a whole year, arranged for quick reference)

These Prices in Effect July 29, 1929, as Posted by Principal Marketing Companies

S.O. NEW JERSEY TERRITORY

	Gasoline				Oil
			Total		
	T.W.	Tax	T.W.	S.S.	T.W
Atlantic City, N.J.	12	2	14	18	13
Newark, N. J.	14	2	16	20	13
Annapolis, Md.	14	4	18	22	13
Baltimore, Md.	14	4	18	22	12
Cumberland, Md.	14	4	18	22	13
Washington, D. C.	14	2	16	20	12
Danville, Va.	14	5	19	23	12
Norfolk, Va.	14	5	19	23	13
Richmond, Va.	14	5	19	23	13
Roanoke, Va.	13	5	18	21	13
Petersburg, Va.	14	5	19	23	13
Charleston, W. Va.	14	4	18	22	13
Keyser, W. Va.	14	4	18	22	13
Parkersburg, W. Va.	14	4	18	22	13
Wheeling, W. Va.	14	4	18	22	13
Charlotte, N. C.	14	5	19	23	13
Hickory, N. C.	14	5	19	23	13
Mt. Airy, N. C.	14	5	19	23	13
Salisbury, N. C.	14	5	19	23	13
Charleston, S. C.	14	6	20	24	13
Columbia, S. C.	14	6	20	24	13

CONTINENTAL OIL

Denver, Colo.	14	4	18	21	15.5
Pueblo, Colo.	14	4	18	21	15.5
Grand Junc., Colo.	18.5	4	22.5	25.5	19
Casper, Wyo.	17	4	21	24	14
Cheyenne, Wyo.	18	4	22	25	15.5
Butte, Mont.	20.5	5	25.5	28.5	20
Helena, Mont.	20.5	5	25.5	28.5	20
Salt Lake City, Utah.	18.5	3½	22	25	17
Boise, Ida.	20.5	4	24.5	27.5	19
Twin Falls, Ida.	20.5	4	24.5	28.5	19
Albuquerque, N. M.	16	5	21	24	17

S. O. CALIFORNIA

Phoenix, Ariz.	14	4	18	22	20.5
Los Angeles, Cal.	16.5	3	19.5	22.5	15.5
Fresno, Cal.	17	3	20	23	17
San Francisco, Cal.	17	3	20	23	15.5
Reno, Nev.	21	4	25	28	19
Portland, Ore.	17.5	3	20.5	23.5	16.5
Seattle, Wash.	17.5	3	20.5	23.5	16.5
Spokane, Wash.	21.5	3	24.5	27.5	20.5
Tacoma, Wash.	17.5	3	20.5	23.5	16.5

Note: 4c per gal. discount to dealers off t.w. price of gasoline to customers taking tank truck delivery, thru S. O. California territory, except 1c discount at Phoenix to dealers only.

S. O. LOUISIANA

Little Rock, Ark.	15	5	20	24	13
Alexandria, La.	14	4	18	22	†16
Baton Rouge, La.	13	4	17	21	†14.5
Lake Charles, La.	††15.5	4	††19.5	††23.5	†16
New Orleans, La.	*13.5	4	*17.5	21.5	†16
Shreveport, La.	14.5	4	18.5	22.5	†15
Lafayette, La.	**15	4	**19	**23	†14
Bristol, Tenn.	17	5	22	25	14
Chattanooga, Tenn.	16.5	5	21.5	25.5	16
Knoxville, Tenn.	15	5	20	24	16
Nashville, Tenn.	14	5	19	23	16
Memphis, Tenn.	13	5	18	22	12.5

*New Orleans gasoline prices include 1c parish tax in addition to 4c state tax, and kerosene prices include 1c state tax and 1c parish tax.

†Kerosene price in Louisiana includes 1c state tax.

**Lafayette gasoline prices include 1c parish tax in addition to 4c state tax.

††Lake Charles gasoline prices include 1c parishtax.

S. O. KENTUCKY

Ashland, Ky.	13	5	18	19	15.5
Catlettsburg, Ky.	13	5	18	19	15.5
Lexington, Ky.	16	5	21	22	15.5
Louisville, Ky.	16	5	21	23	15
Covington, Ky.	16	5	21	22	15.5
Clarksdale, Miss.	15	5	20	22	12.5
Gulfport, Miss.††	18.5	5	23.5	25.5	14
Jackson, Miss.	17	5	22	24	13
Natchez, Miss.	16.5	5	21.5	23.5	14
Vicksburg, Miss.	16.5	5	21.5	23.5	14
Birmingham, Ala.	16	4	20	22	16
Mobile, Ala.‡	18	4	22	24	15
Montgomery, Ala.*	19	4	23	25	16.5
Atlanta, Ga.	16	4	20	22	†16.5
Augusta, Ga.	16	4	20	22	†15.5
Macon, Ga.	18	4	22	24	†16.5
Savannah, Ga.	17	4	21	23	†15.5
Jacksonville, Fla.	17	6	23	25	14.5
Miama, Fla.	18	6	24	26	15.5
Tampa, Fla.	17	6	23	25	14.5
Pensacola, Fla.**	18	6	24	26	14.5

Note: Net price to dealers is 2c under posted t.w. price thru S. O. Kentucky territory.

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosene at Montgomery included. ‡Mobile gasoline prices include 1c city tax.

†Georgia kerosene prices include 1c state tax.

**Both tank wagon prices include 1c city tax at Pensacola, which went into effect Oct. 15, 1926.

††Both tank wagon prices at Gulfport include Harrison county privilege tax of 2c.

S. O. NEBRASKA

	Gasoline				Oil
			Total		
	T.W.	Tax	T.W.	S.S.	T.W.
Omaha, Neb.	16.25	4	20.25	22.25	13.25
McCook	17.75	4	21.75	23.75	14.75
Norfolk	16.75	4	20.75	22.75	13.75
North Platte	17.75	4	21.75	23.75	14.50
Scottsbluff	17.75	4	21.75	23.75	14.25

S. O. INDIANA

Chicago, Ill.	16.0	0	16.0	17.0	13
Decatur, Ill.	16.2	0	16.2	17.2	13.1
E. St. Louis, Ill.	15.4	0	15.4	16.4	12.2
Joliet, Ill.	16.4	0	16.4	17.4	13.3
Peoria, Ill.	16.2	0	16.2	17.2	13.1
Quincy, Ill.	16.2	0	16.2	17.2	12.9
Indianapolis, Ind.	16.2	4	20.2	21.2	14.2
Evansville, Ind.	16	4	20	21	14
South Bend, Ind.	16.4	4	20.4	21.4	14.4
Detroit, Mich.	16.8	3	19.8	20.8	14.7
Grand Rapids, Mich.	16.7	3	19.7	20.7	14.6
Saginaw, Mich.	16.9	3	19.9	20.9	14.8
Green Bay, Wisc.	16.6	2	18.6	19.6	13.4
Madison, Wisc.	16.3	2	18.3	17.3	13.1
Milwaukee, Wisc.	16.1	2	18.1	19.1	12.9
La Crosse, Wisc.	17.2	2	19.2	20.2	14
Minneapolis, Minn.	17.2	3	20.2	21.2	13.9
Duluth, Minn.	17.5	3	20.5	21.5	13.9
Mankato, Minn.	17.1	3	20.1	21.1	13.7
Des Moines, Ia.	16.5	3	19.5	20.5	13.3
Davenport, Ia.	16.5	3	19.5	20.5	13.3
Sioux City, Ia.	16.1	3	19.1	20.1	12.9
Mason City, Ia.	16.5	3	19.5	20.5	13.3
St. Louis, Mo.	*15.9	2	17.9	18.9	12.3
Kansas City, Mo.	†16.9	2	18.9	19.9	11.6
St. Joseph, Mo.	†16.5	2	18.5	19.5	12.2
Fargo, N. D.	18.9	3	21.9	22.9	15.9
Grand Forks, N. D.	19.2	3	22.2	23.2	16.2
Minot, N. D.	18.9	3	21.9	22.9	15.9
Pierre, S. D.	17	4	21	22	14.4
Huron, S. D.	17.3	4	21.3	22.3	14.7
Wichita, Kans.	14.8	3	17.8	18.8	11.8
Bartlesville, Okla.	14.5	3	17.5	18.5	11.5

S. O. Indiana's quantity contract price schedule thru territory except Chicago on tank truck deliveries of gasoline, figured from the service station price, is 2c for 500 gals. or more a month; 2½c for 2000 gals. or more a month and 3c for 6000 gals. or more a month.

In Chicago and vicinity, these discounts apply Over 500 gals. per month, 2c per gal. off service station price; over 1,000 gals. per month, 4c per gal. off service station price.

*Includes city tax of ½c.

†Includes city tax of 1c.

S. O. OHIO

Bryan	*13	4	*17	17	13
Washington, Noble, Meigs and Lorain Counties and ††13 Competitive Points	14	4	18	18	13
†At 6 Competitive Points	*14	4	*18	19	13
Elsewhere in Ohio	*15	4	*19	20	13

†These 6 points are: Hicksville, Celina, Arlington, Mortimer, Mendon and Nevada, O.

*Dealers and commercial accounts get 2c per gal. off t.w. price.

††These 13 points are: Findlay, Arcadia, Perrysburg, Fostoria, Wapakoneta, Urbana, Jamestown, Marion, St. Paris, Ada, Lima, Hamilton and Piqua. Discount to dealers is 3c per gal. off t.w. price.

Latest Changes in Tank Wagon Prices

Gasoline Changes

S. O. New York—T.w. and s.s. gasoline up 1c, upper New York state, including Albany, Buffalo, Rochester and Syracuse districts, to 18c and 20c respectively, including 2c tax, **July 24.** New York City was unchanged.

Atlantic Refining—Jacksonville, Fla. prices should have been 23c t.w. and 25c s.s. since the 1c increase in state tax on July 1, bringing total tax to 6c.

S. O. Kentucky—T.w. and s.s. gasoline cut 2c, Birmingham, to 20c and 22c respectively, including 4c tax, **July 23.**

T.w. and s.s. gasoline cut 2c, Augusta, to 20c and 22c respectively, including 4c tax, **July 13.**

T.w. and s.s. up 4c, Tampa, to 23c and 25c respectively, including 6c tax, **July 22.**

T.w. and s.s. cut 2c, Clarksdale, to 20c and 22c, including 5c tax, **July 24.**

S.s. only cut 1c, Lexington, to 22c, **July 23.**

S. O. Ohio—T.w. and s.s. prices gasoline cut 1c, through Ohio, July 26, to 19c and 20c respectively, state-wide schedule. Prices at Bryan, O. were unchanged at 17c for both t.w. and s.s., and at Lima and Hamilton unchanged at 18c for both t.w. and s.s. Last previous general change was a 1c advance through Ohio on **May 29.**

Prices in Washington and Noble counties, which had been on the state-wide structure of 20c t.w. and 21c s.s., became 18c for both t.w. and s.s. on **July 26,** effecting a cut of 2c on t.w. and 3c on s.s.

Mendon, O. was cut 2c on both t.w. and s.s. to 18c t.w. and 19c s.s., **July 26.**

S. O. Indiana—S.s. price only of gasoline cut 2c, Madison, to 17.3c, including 2c tax, **July 19.** T.w. unchanged at 18.3c.

Illinois gasoline tax of 3c goes into effect **Aug. 1** and gasoline through Illinois will be advanced accordingly on that date.

S. O. Louisiana—T.w. and s.s. gasoline cut 1c, New Orleans, to 17.5c and 21.5c, including 4c state tax and 1c parish tax, **July 26.**

Kerosene Changes

S. O. Ohio—Kerosene cut 1c, to 13c t.w., through Ohio, **July 26.** Last previous change was a 1c advance on **April 9.**

Above prices include these inspection fees on both gasoline and kerosene, per gallon: Alabama, 1,40c on gasoline, 1/2c kerosene; Arkansas, 1/20c on both; Florida, 1/8c on both; Georgia, 1/10c on both; Indiana, 4/25c to 1/2c on both; Kansas, 3/50c on both; Louisiana, 1/32c on gasoline; Minnesota, 3/50c on both; Missouri, 3/10c to 1/2c on both; Nebraska, 3/50c to ½c on both; North Carolina, 1/4c on both; North Dakota, 1/20c on both; Oklahoma, 4/25c on both; South Carolina, 1/8c on both; South Dakota, 1/10c on both; Tennessee, 2/5c on gasoline and 1/2c to 4/5c on kerosene; Wisconsin, 3/50c on both.

Kerosene inspection fees only, per gallon; Iowa, 7/100c; Michigan 1/5c to 4/5c per gal.

In Illinois, cities and villages have the power to appoint oil inspectors and fix inspection fees which is done in some instances. In some cases in the above state or other states there are local inspection fees.

Tank Wagon, Service Station Markets for Gasoline and Kerosene

Prices in Effect July 29, 1929

MAGNOLIA PETROLEUM

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Muskogee, Okla.	13	4	17	20	13
Oklahoma City	13	4	17	20	10
Tulsa, Okla.	11	4	15	19	10
Fort Smith, Ark.†	12	†4	16	20	12
Little Rock, Ark.	15	5	20	24	13
Texarkana, Ark.*	13	*4	17	21	12
Dallas, Tex.	13	4	17	21	13
Fort Worth, Tex.	13	4	17	20	12
Houston, Tex.	13	4	17	21	13
San Antonio, Tex.	13	4	17	21	11
El Paso, Tex.	13	4	17	21	16

*Within city of Texarkana, the state tax on gasoline is 4c per gal. conforming with the Texas state tax. In this district outside of the city the 5c Arkansas tax applies.

†Within city of Fort Smith, Oklahoma tax of 4c applies. In this district outside of the city, the 5c Arkansas tax applies.

S. O. NEW YORK

Due to local price conditions at many points in S. O. New York territory, actual prices on both gasoline and kerosene are being made at under the posted tank wagon prices published below.

New York City	17	2	19	*21	15
Albany, N. Y.	16	2	18	20	15
Buffalo, N. Y.	16	2	18	20	14
Rochester, N. Y.	16	2	18	20	13
Syracuse, N. Y.	16	2	18	20	12
Boston, Mass.	16	2	18	20	15
Augusta, Me.	16	4	20	22	15
Manchester, N. H.	14	4	18	19	15
Burlington, Vt.	16	4	20	22	13

Note: S. O. New York allows concessions of 1 to 2c per gal. to dealers under posted tank wagon prices.

*The Standard of New York does not operate stations in New York City. This figure is the retail price of a principal station operator in New York selling Socony gasoline.

ATLANTIC REFINING

Pittsburgh, Pa.	17	*	17	23	14
Philadelphia, Pa.	17	*	17	23	14
Allentown, Pa.	17	*	17	23	14
Erie, Pa.	13	*	13	19	14
Scranton, Pa.	17	*	17	23	14
Altoona, Pa.	17	*	17	23	14
Williamsport, Pa.	16	*	16	20	14
Dover, Del.	17	3	20	22	14
Wilmington, Del.	17	3	20	22	14
Boston, Mass.	16	2	18	20	15
Springfield, Mass.	16	2	18	20	15
Worcester, Mass.	15	2	17	18	15
Fall River, Mass.	14	2	16	17	15
Providence, R. I.	14	2	16	17	15
Hartford, Conn.	16	2	18	20	14
New Haven, Conn.	16	2	18	20	15
Atlantic City, N. J.	16	2	18	20	13
Camden, N. J.	16	2	18	20	13
Trenton, N. J.	16	2	18	20	13
Annapolis, Md.	16	4	20	22	13
Baltimore, Md.	16	4	20	22	13
Hagerstown, Md.	16	4	20	22	13
Richmond Va.	16	5	21	23	13
Wilmington, N. C.	16	5	21	23	13
Brunswick, Ga.	17	4	21	23	**16.5
Jacksonville, Fla.	17	6	23	25	14.5

Note: 2c per gal. discount off t.w. price to dealers thru territory; also 2c off to commercial accounts under contract for one year.

*4-cent state tax is collected by retail dealer and paid by him directly to state.

**Georgia kerosene prices include 1c state tax.

V. M. & P. NAPHTHA

(Changes ordinarily occur coincident with gasoline price changes)

	Oleum Spirits	V.M.&P. Naphtha	Cleaner Naphtha
Chicago	15.7	17.2	19
Detroit	17.4	18.9	20.7
Kansas City	†15.9	†17.4	†19.2
Milwaukee	16.4	*19.9	*21.7
Minneapolis	*19.7	*21.2	*23
St. Louis	15.6	17.1	18.9
New York		17	23
Boston		19	23

*Includes 2c state tax. †Includes 1c city tax.

Petroleum Spirits

Tank Cars (Solvent)	
New York refineries	12.00
Philadelphia refineries	12.00
Tank Wagon or Steel Barrels	
New York City	17
New England	19
New Jersey	16
Pennsylvania	16-18

(Continued on Page 124)

OIL TIGHT STORAGE

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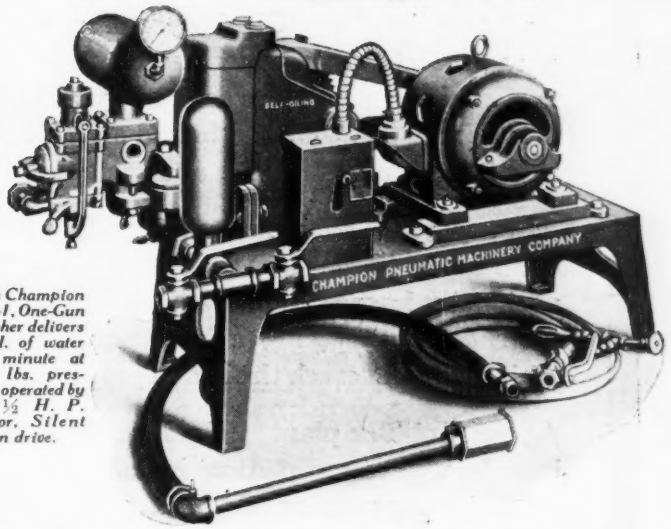

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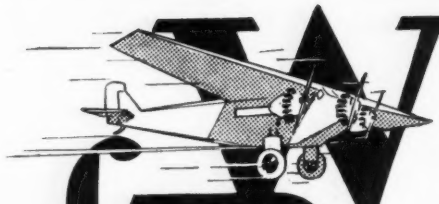

Wings of Progress

MODERN refining keeps pace with the tempo of fast-changing marketing conditions and improved methods in the manufacture of petroleum products.

Anderson-Prichard Oil Corporation, associated with Col-Tex Refining Company, maintains an experienced technical department of outstanding chemists and engineers, who are constantly alert to every progressive trend in the refining industry. Our technical staff is now spending in excess of $1,500,000.00 in refinery improvements and installing the most modern cracking facilities.

At our Cyril, Oklahoma, plant we have rebuilt a large part of the special Industrial Naphtha Department to meet the ever increasing demand for our nationally known Industrial Naphthas; we have also installed at Cyril a complete cracking plant entirely separate from our manufacture of naphthas. This plant will crack the heavy gas oils into volatile anti-knock motor gasolines.

At our Col-Tex plant, Colorado, Texas, with a daily crude capacity of 10,000 barrels, we are completing installation of the most modern cracking process available for refining Col-Tex gasoline—already well known throughout the trade territory for its volatile anti-knock virtues.

We are now prepared to solicit inquiries from jobbers concerning our new co-operative marginal contracts on all grades of gasoline, industrial naphthas, kerosenes, furnace oils, gas oils, fuel oils and road oils.

ANDERSON-PRICHARD OIL CORPORATION
COL-TEX REFINING COMPANY

PRODUCERS AP REFINERS

OKLAHOMA CITY, OKLA.

Address all communications to Oklahoma City offices

Look for our future announcements in this publication

Crude Oil Prices (in Effect July 29, 1929)

(Crude prices for the whole year in OIL PRICE HANDBOOK published annually)

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Penna. Grade Oil in New York Transit Lines (Alleghany, N. Y. District) *$3.80
Bradford District Oil in National Transit Lines (Bradford District) *3.80
Penna. Grade Oil in National Transit Lines (Other Pennsylvania) *3.80
Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania) 3.75
Penna. Grade Oil in Eureka Pipe Lines (West Virginia) 3.65
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O. district) 3.50
Cabell Grade in Eureka Pipe Lines (West Virginia) 1.65
Corning Grade in Buckeye Pipe Lines (Ohio) 1.90
Corning, O., heavy grade 1.80
Somerset Oil in Cumberland Pipe Lines (Kentucky) 1.80
Ragland Grade in Cumberland Pipe Lines (Kentucky) $0.60

***Oil run prior to July 1, 1929 is $3.75 per bbl.**

(Posted by Stoll Oil Refining Co.)

Oil City, Ky., oil in Stoll lines $1.80

MICHIGAN

(Posted by Dixie Oil Co.)

Dundee (Muskegon) $1.10

Traverse (Muskegon):

32-32.9	$1.25	37-37.9	$1.50
33-33.9	1.30	38-38.9	1.55
34-34.9	1.35	39-39.9	1.60
35-35.9	1.40	40-40.9	1.65
36-36.9	1.45	41-41.9	1.70

(Posted by Pure Oil Co.)

Midland, Midland County $1.70

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

Effective May 21, 1929

Wooster	$1.90	Princeton	$1.75
Lima	1.80	Illinois	1.75
Waterloo	1.20	Plymouth	1.28
Indiana	1.57	West Kentucky	1.83

CANADIAN CRUDE

Posted by Imperial Oil Refineries, Ltd.

Petrolia $2.20
Oil Springs 2.27

OKLAHOMA, KANSAS and NORTH TEXAS

Prices of Prairie Oil & Gas Co.

(In Oklahoma, Kansas, North and East Central Texas)

Effective May 20, 1929

Below 25	$0.85	35-35.9	$1.40
25-25.9	0.90	36-36.9	1.45
26-26.9	0.95	37-37.9	1.50
27-27.9	1.00	38-38.9	1.55
28-28.9	1.05	39-39.9	1.60
29-29.9	1.10	40-40.9	1.65
30-30.9	1.15	41-41.9	1.70
31-31.9	1.20	42-42.9	1.75
32-32.9	1.25	43-43.9	1.80
33-33.9	1.30	44 and above	1.85
34-34.9	1.35		

Humble Oil & Refining Co. Prices

(Ranger, North Texas, Mexia, Powell, Boggy Creek, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona crudes all in Texas.)

May 20, 1929, same schedule as Prairie in above fields.

Magnolia Petroleum Co.

(In Oklahoma, Kansas and North and East Central Texas)

May 20, 1929, Magnolia posted in above fields and in Panola Co., same schedule as Prairie, except these grades:

Below 26	$0.70	29-29.9	$0.95
26-26.9	0.75	30-30.9	1.05
27-27.9	0.85	31-31.9	1.15
28-28.9	0.90		

May 20, 1929, Glasscock, Crane, Upton, Winkler, Howard and Mitchell Counties same prices as Humble's postings in West Texas which see:

Iatan district $0.93
Corsicana heavy 0.80
Luling 0.90
Mirando 0.90

Carter Oil Co.

(Oklahoma and Kansas)

May 20, 1929, same schedule as Prairie except Carter does not post oil below 25.

PANHANDLE, TEXAS

Humble Oil & Refining Co.

Effective May 20, 1929

Hutchinson and Carson Counties:

Below 32	$0.90	38-38.9	$1.25
32-32.9	0.95	39-39.9	1.30
33-33.9	1.00	40-40.9	1.35
34-34.9	1.05	41-41.9	1.40
35-35.9	1.10	42-42.9	1.45
36-36.9	1.15	43-43.9	1.50
37-37.9	1.20	44 and above	1.55

Wheeler County:

Below 30	$0.90	37-37.9	$1.30
30-30.9	0.95	38-38.9	1.35
31-31.9	1.00	39-39.9	1.40
32-32.9	1.05	40-40.9	1.45
33-33.9	1.10	41-41.9	1.50
34-34.9	1.15	42-42.9	1.55
35-35.9	1.20	43-43.9	1.60
36-36.9	1.25	44 and above	1.65

Gray County:

Below 29	$0.90	37-37.9	$1.35
29-29.9	0.95	38-38.9	1.40
30-30.9	1.00	39-39.9	1.45
31-31.9	1.05	40-40.9	1.50
32-32.9	1.10	41-41.9	1.55
33-33.9	1.15	42-42.9	1.60
34-34.9	1.20	43-43.9	1.65
35-35.9	1.25	44 and above	1.70
36-36.9	1.30		

Above prices met by The Texas Co. and Magnolia on May 20.

WEST TEXAS

Humble Oil & Refining Co.

Effective May 20, 1929

Winkler, Crane, Upton, Crockett, Howard and Pecos Counties, also Lea County, N. Mex.

Below 25	$0.70	25-25.9	$0.74
26-26.9	$0.78	32-32.9	$1.02
27-27.9	0.82	33-33.9	1.06
28-28.9	0.86	34-34.9	1.10
29-29.9	0.90	35-35.9	1.14
30-30.9	0.94	36 and above	1.18
31-31.9	0.98		

May 20, 1929, The Texas Co. posted same prices as Humble in Crane, Upton, Pecos and Winkler., and Magnolia in Crane, Upton, Winkler, Glasscock, Howard and Mitchell

SOUTHWEST TEXAS

(Posted by Humble Oil & Refining Co.)

Effective May 20, 1929

Mirando $0.90
Salt Flat 1.25

NORTH LOUISIANA—ARKANSAS FIELDS

Prices of Standard Oil Co. of Louisiana

Caddo, Homer, Haynesville, Bull Bayou, El Dorado, Crichton, De Soto and **Cotton Valley.

Effective May 22, 1929

Below 28	$1.00	36-36.9	$1.45
28-28.9	1.05	37-37.9	1.50
29-29.9	1.10	38-38.9	1.55
30-30.9	1.15	39-39.9	1.60
31-31.9	1.20	40-40.9	1.65
32-32.9	1.25	41-41.9	1.70
33-33.9	1.30	42-42.9	1.75
34-34.9	1.35	43-43.9	1.80
35-35.9	1.40	44 and above	1.85

**Cotton Valley, below 36, $0.85. Beginning with 36-36.9, same schedule as above.

Smackover, below 24 ..... $0.85
do 24 and above 1.00
Bellevue 1.30
*Urania, La 1.10
†East El Dorado 0.75

*Posted by Louisiana Oil Refining Corp.
†Posted by Magnolia Petroleum Co.

May 20, The Texas Co. same schedule in Louisiana as Standard, plus these grades: 24-24.9, $0.85; 25-25.9, $0.90; 26-26.9, $0.95; 27-27.9, $1.00.

May 22, Magnolia, Atlantic, Shreveport-Eldorado Pipe Line, Louisiana Oil, and Gulf Companies met Standard schedule in Louisiana-Arkansas fields.

STEPHENS, ARKANSAS

Louisiana Oil Refining Corp., and Atlantic Oil Producing Co.

Effective May 22, 1929

Below 28	$0.90	30-30.9	$1.02
28-28.9	0.94	31-31.9	1.06
29-29.9	0.98	32 and above	1.10

GULF COASTAL

Posted by Humble Oil & Refining Co.

Effective May 20, 1929

Grades A	$1.30	29-29.9	$1.30
Grades B:		30-30.9	1.33
Below 25	$1.15	31-31.9	1.36
25-25.9	1.18	32-32.9	1.39
26-26.9	1.21	33-33.9	1.42
27-27.9	1.24	34-34.9	1.45
28-28.9	1.27	35 and above	1.48

Fields classified as A and B are Spindletop, Goose Creek, Hull, Liberty, Sour Lake, West Columbia, Orange, Boling, Pierce Junction, Sugarland and Raccoon Bend. All other fields are Grades A only.

Handling Oil Field Brine Discussed in Reports

CLEVELAND, July 29.—Oil field brines flowing over agricultural lands or into creeks and streams often result in serious harm, although there is a reasonable doubt in many cases as to the actual extent of the damage.

This is brought out in a recent report (Serial 2945) of the U. S. Bureau of Mines, entitled "The Disposal of Oil-Field Brines" by Ludwig Schmidt, petroleum engineer with the Bartlesville, Okla., station of the bureau, and John M. Devine, assistant organic chemist at Bartlesville. The Wiser Oil Co. and the Indian Territory Illuminating Oil Co. assisted in the field investigations.

Preliminary investigations relating to the four general methods now used in the disposal of oil field brines indicate the following:

1. The successful use of ponds for evaporation in the district studied is limited to properties producing very small quantities of brine; however, ponds are of great value for temporary storage of brine.

2. Plants for recovering the common salts from oil-field brines are uneconomical except in special cases. Further investigation of the brines produced with petroleum may disclose that the rarer salts can be economically obtained.

3. The diversion of oil-field brines into selected streams offers possibilities. During the past summer the writers made a preliminary survey of some of the larger streams in Oklahoma and found that it might be feasible to allow the diversion of certain of the oil-field brines into selected streams. However, detailed surveys covering all seasons of the year should be made of the various streams. A complete analysis to insure absence of poisonous salts should be made of all brines that are to be allowed to enter streams. The delivery of brine from a field to the selected stream can be accomplished by pipe lines, or a small tributary stream, if available, could be set aside for that purpose, providing fresh water can otherwise be supplied to those obtaining their water for human or stock consumption from the tributary stream.

4. The disposal of oil-field brines by returning them to a subsurface formation, from the information thus far obtained, appears to be feasible in isolated instances. However, great care must be used in attempting this method. Not only is there danger that the water will migrate to fresh-water sands and pollute a potable water supply, but also there is an ever present possibility that this water may endanger oil production.

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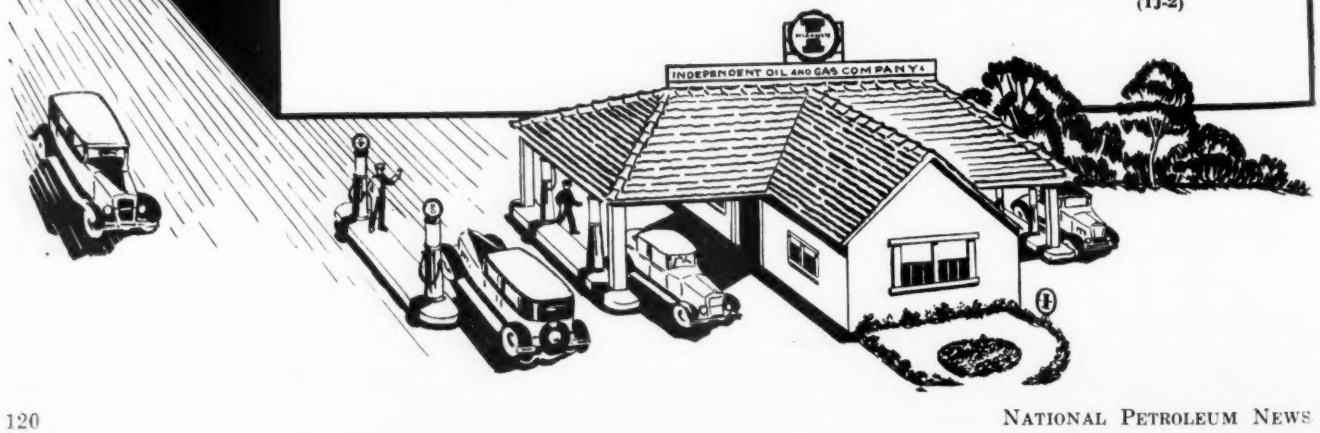

Crude Oil Prices (in Effect July 29, 1929)

(Crude prices for the whole year in OIL PRICE HANDBOOK published annually)

GULF COASTAL

Prices of The Texas Co.

Effective May 20, 1929

Grades A	$1.30	*Grades B	$1.15
‡Grades B (light crude):			
35-35.9	$1.49	40-40.9	$1.69
36-36.9	1.53	41-41.9	1.73
37-37.9	1.57	42-42.9	1.77
38-38.9	1.61	43-43.9	1.81
39-39.9	1.65	44 and above	1.85

*Grades B include all heavy crudes which do not meet tests for Grades A or for Gulf Coast light crude.

‡The Texas Co.'s gravity and price schedule on all below 35° is same as Humble's postings on Grades B.

ROCKY MOUNTAIN FIELDS

Prices of Ohio Oil Co., and Midwest Refining Co.

(Salt Creek prices effective May 20, 1929)

‡Salt Creek 29-29.9	$1.10
" " 30-30.9	1.15
" " 31-31.9	1.20
" " 32-32.9	1.25
" " 33-33.9	1.30
" " 34-34.9	1.35
" " 35-35.9	1.40
" " 36-36.9	1.45
" " 37 and above	1.50
Elk Basin	1.65
Grass Creek light	1.65
Big Muddy	$1.43
Lance Creek	1.68
Rock Creek	1.40
Mule Creek	1.20
Rex Lake	1.10
‡Osage	1.65
‡Cat Creek, Mont	1.65
Sunburst, Mont	1.75
‡Hogback, N. Mex	1.70
Artesia, N. Mex	1.08

‡Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin.

CALIFORNIA

***Standard Oil Co. of California**

Gravity	Signal Hill Seal Beach Alamitos Heights Huntington Beach	Inglewood Torrance	Olinda-Brea Canon Richfield	Athens-Rosecrans Dominguez	Elwood Terrace	Whittier La Habra	Coyote Hills	Santa Fe Springs	Newhall McKittrick †Kern River	Midway Sunset Buena Vista & Elk Hills	Lost Hills	Coalinga	Wheeler Ridge	Montebello	Kettleman Hills	*Santa Maria (Orcutt)	*Ventura
14-14.9	$ .70	$ .70	$ .70	....	....	$ .70	$ .70	....	$ .50	$ .50	$ .50	$ .50	$ .50	$ .70	....	$ .65	$ .70
15-15.9	.70	.70	.70	....	....	.70	.70	....	.50	.50	.50	.50	.50	.70	....	.65	.70
16-16.9	.70	.70	.70	....	....	.70	.70	....	.50	.50	.50	.50	.50	.70	....	.65	.70
17-17.9	.70	.70	.70	....	....	.70	.70	....	.50	.50	.50	.50	.50	.70	....	.65	.70
18-18.9	.75	.75	.75	....	....	.75	.75	....	.50	.56	.56	.56	.56	.70	....	.70	.75
19-19.9	.80	.80	.80	....	....	.80	.80	....	.50	.62	.62	.62	.62	.75	$1.65	.70	.80
20-20.9	.85	.85	.85	....	....	.84	.84	....	....	.68	.68	.68	.68	.80	for	.70	.85
21-21.9	.89	.89	.89	....	....	.88	.88	.89	....	.74	.74	.74	.74	.85	55°	.86	.86
22-22.9	.93	.93	.93	....	....	.91	.91	.92	....	.80	.80	.80	.80	.90	gravity	.87	.87
23-23.9	.97	.97	.97	....	....	....	.94	.95	....	.85	.85	.85	.85	.95	and	.90	.90
24-24.9	1.01	1.01	1.01	1.01	....	....	.97	.98	....	.90	.90	.88	.88	.98	over	.94	.94
25-25.9	1.05	1.05	1.05	1.05	....	....	1.00	1.01	....	.95	.95	.91	.91	1.01	....	.98	.98
26-26.9	1.09	1.09	1.09	1.09	....	....	1.04	1.04	....	1.00	1.00	.94	.94	1.04	....	1.02	1.02
27-27.9	1.13	1.13	1.13	1.13	....	....	1.08	1.07	....	1.05	1.05	.98	.97	1.07	....	....	1.06
28-28.9	1.17	1.17	1.17	1.17	....	....	1.12	1.10	....	1.10	1.10	1.02	....	1.10	....	....	1.10
29-29.9	1.21	....	1.21	1.21	....	....	1.16	1.15	....	1.16	1.16	1.06	....	1.13	....	....	1.14
30-30.9	1.25	....	1.25	1.25	....	....	1.20	1.20	....	1.22	1.22	1.10	....	1.16	....	....	1.18
31-31.9	1.30	....	....	1.30	....	....	....	1.25	....	1.28	1.28	1.14	....	....	....	....	1.23
32-32.9	1.35	....	....	1.35	....	....	....	1.30	....	1.34	1.34	1.18	....	....	....	....	1.28
33-33.9	....	....	....	1.41	....	....	....	1.35	....	1.40	1.40	1.22	....	....	....	....	1.34
34-34.9	....	....	....	1.47	$1.16	....	....	1.40	....	....	1.46	1.26	....	....	....	....	....
35-35.9	....	....	....	1.53	1.22	....	....	1.45	....	....	....	1.30	....	....	....	....	....
36-36.9	....	....	....	1.59	1.28	....	....	1.50	....	....	....	....	....	....	....	....	....
37-37.9	....	....	....	1.65	1.34	....	....	1.55	....	....	....	....	....	....	....	....	....
38-38.9	....	....	....	1.71	1.40	....	....	1.60	....	....	....	....	....	....	....	....	....
39-39.9	....	....	....	1.77	1.46	....	....	1.65	....	....	....	....	....	....	....	....	....
40-40.9	....	....	....	1.83	1.52	....	....	....	....	....	....	....	....	....	....	....	....
41-41.9	....	....	....	1.89	1.58	....	....	....	....	....	....	....	....	....	....	....	....
42-42.9	....	....	....	1.95	1.64	....	....	....	....	....	....	....	....	....	....	....	....

*Santa Maria and Ventura postings are by Union Oil Co. Union Oil Co. posts same prices in all above fields as Standard except it does not post prices in Wheeler Ridge, Whittier, La Habra, Newhall and Kettleman Hills. Standard does not contract for crude testing 11-13.9 gravity, but pays 45c a barrel when purchased.

†Kern River down to 12° gravity is 50c; 11-11.9 is 45c.

REFINERS' and COMPOUNDERS' SUPPLIES

Following are average market prices for materials used by refiners and compounders effective on the date shown.

Refiners' Supplies

	July 29	July 22
Soda Ash light 58% bags, cwt.	$1.32	$1.32
Silicate of Soda 60 deg. drums, cwt.	$1.55	$1.55
Silicate of Soda 40 deg. tank cars, cwt.	$0.60	$0.60
Silicate of Soda 40 deg. drums cwt.	$0.80	$0.80
Sal Soda wks.	$0.90-1.00	$0.90-1.00
Caustic Soda 76% solid, cwt.	$2.90	$2.90
Sulfuric Acid 60 deg. tank cars, f.o.b. shipping point per ton	$11.00	$11.00
Oleum 20%, fuming sulfuric, tank cars, wks.	$18.50	$18.50
Sulfur, flowers of, cwt.	$3.50-4.50	$3.50-4.50
Liquid Chlorine, tank cars, wks, lb.	3.50–5.00	3.50–5.00

Compounders' Supplies

	July 29	July 22
Vegetable Oils		
Linseed carloads, spot, lb.	12.80	11.20
Tanks, spot	12.00	10.40
Soya Bean, Tanks, coast, lb.	9.50	8.50
Oleic Acid		
Distilled, tanks, lb.	9.25	9.25
Distilled, bbls, lb.	10.375	10.375
Saponified, tanks, lb.	9.50	9.50
Saponified, bbls, lb.	10.625	10.625
Lard Oils		
Prime Winter Strained, lb.	15.00	15.00
Extra Winter Strained, lb.	13.00	13.00
Extra, lb.	12.625	12.265
Extra No. 1, lb.	12.00	12.00
No. 1, lb.	11.75	11.75
No. 2, lb.	11.50	11.50
Tallow oil, lb.	10.75	10.75
Neatsfoot Oil		
Pure, bbls, lb.	13.50	13.50
Extra, bbls, lb.	12.25	12.25
No. 1 bbls, lb.	12.00	12.00
Cold Pressed, lb.	18.75	18.75
Fish Oils		
Menhaden Oil		
Light Pressed, gal.	72	72
Light Pressed, tank cars, N.Y. gal.	62	62
White bleached, gal.	77	77
Yellow bleached, gal.	75	75
Whale, extra winter bleached, gal.	82	82
Naval Stores		
Steam distilled turpentine, N. Y., gal.	51	51
Steam distilled turpentine, Savannah, gal.	45	45
Gum turpentine, N. Y., gal.	50	50
Gum turpentine, f.o.b. cars Savannah, gal.	48	48
Wood Rosin F, N. Y., bbl.	$7.30	$7.30
Wood Rosin F, Savn'h, bbl.	$6.50	$6.50
Gum Rosin B, N. Y., bbl.	$8.60	$8.60
Gum Rosin B, f.o.b. cars Savannah, bbl.	$7.75	$7.75
Rosin oil, pure, gal.	61	61
Rosin oil, compounded, gal.	50	50
Pine Tar		
Kiln burnt, bbl.	$13.00–14.00	$13.00–14.00
Retort, bbl.	$13.50–14.50	$13.50–14.50
Alcohol		
Denatured Formula 5, in bbls., per gal.	57–64	57–64

OIL STOCKS AND FINANCES

National Petroleum News

Indiana Standard Seeks Full Ownership of Pan American

CLEVELAND, July 27

ANOTHER step of the Standard Oil Co. of Indiana to fortify its position by assuring itself a future crude oil supply, is its plan to acquire a larger interest in the Pan American Petroleum & Transport Co. which it already controls.

Standard of Indiana, upon increasing its capital stock from $375,000,000 to $450,000,000 at a special meeting of stockholders at Whiting, Ind., Aug. 27, will offer holders of both A and B Pan American stock one and a sixth Standard of Indiana shares for each Pan American share held. The offer of exchange is to continue to Nov. 30, 1929.

In connection with the proposed acquisition of a larger interest in the Pan American, E. G. Seubert, president of the Standard, said:

"Standard of Indiana controls Pan American and is responsible for its success. In the discharge of that responsibility we have furnished large sums of money and experienced manpower to assist in expanding and improving the company's properties.

"To continue the development and expansion of Pan American activities for the years to come will require more capital and more men, both of which the Indiana company can supply as needed. The result should assist Pan American to greater earnings.

"The directors of the Indiana company, who are closely associated with activities of Pan American, believe that the interests of the stockholders of both companies can be best conserved and promoted by a closer union and identity of ownership of the two companies, and have determined upon what they believe to be a fair basis of exchange.

"The Pan American stockholders who make the exchange will, of course, through the ownership of Indiana stock—which has paid dividends for over 30 years—enjoy the benefits of a dividend-paying stock and share in the future prospect of Pan American development."

The Standard of Indiana has been in virtual control of the Pan American Petroleum & Transport Co. since 1925 when it was a member of a syndicate that purchased from E. L. Doheny 501,000 Class A voting shares. These shares were held by a holding company, styled the Pan American Eastern Petroleum Co. Other members of the syndicate were the Chase Securities Corp. and Blair & Co. of New York, and British interests which included those of Lord Inverforth.

The Indiana company's original investment was only $3,000,000, a minority investment interest but actually Col. Robert W. Stewart and the Indiana directors dominated the company. It was a managerial control.

Late in 1927 the Indiana company undertook to get voting control of the Pan American by getting a majority interest in the Pan American Eastern. It exchanged 37,500 of its shares for 150,000 shares of the Pan American Eastern stock late in 1927 and early last year it acquired from Blair and Chase 290,000 shares for cash. The latter acquisition gave the Indiana company 440,000 shares or 80 per cent of the common stock of the Pan American Eastern holding company. English interests retained 110,000 shares in the Eastern company.

The Pacific Coast properties of the Pan American were retained by Mr. Doheny when he sold the voting control of Pan American to the syndicate and these properties were vested in a new company he organized, the Pan American Western Petroleum Co., which he disposed of several months ago to a new company, the Pacific Western Oil Corp.

Subsidiaries of the Pan American Petroleum & Transport Co. in 1928 produced 46,631,774 barrels of crude oil, a daily average of more than 100,000 barrels. One of its chief subsidiaries is the Lago Oil & Transport Co. which holds important producing concessions in Venezuela, particularly in the bed of Lake Maracaibo.

The Pan American has outstanding 1,001,599 Class A voting shares and 2,422,068 Class B non-voting shares. Of the total the Indiana company owns approximately 15 per cent. There remains with the public about 2,807,759 A and B shares and about 3,275,719 shares of Indiana stock will be required for the Indiana company to get complete ownership in Pan American.

On completion of the exchange, if all Pan American shares are acquired, the Indiana company will have outstanding 17,202,721 of the 18,000,000 $25 shares expected to be authorized at the Aug. 27 meeting at Whiting.

Besides its production, Pan American has distribution in the states that touch the Atlantic and Gulf coasts and inland as far as it can ship economically from its seaboard refineries or terminals. With the distribution of the Midwest Refining Co. and the Utah Oil Refining Co. in the Rocky Mountains, the Indiana company will have its own distribution in a large majority of the states east of the Pacific Coast states.

Mexican Seaboard Oil Co.—Crude oil production of this company in first half of 1929 averaged 9261 barrels a day as compared with 7900 barrels a day in the first half of 1928.

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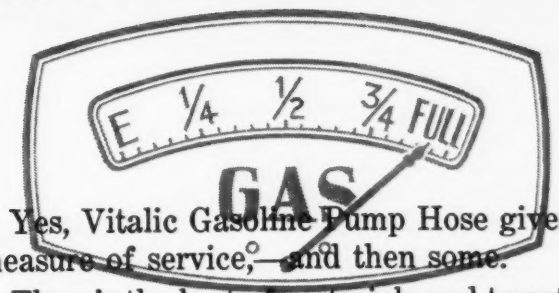

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Transactions in Oil Shares on New York Stock Exchange

1928 High	1928 Low	1929 High	1929 Low	Listed Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended July 27 Sales	First	High	Low	Last	Change
43⅞	27⅛	42⅝	22½	(sh) 922,075	N.P.	Amerada Corp.	50cQ	July 31, 29	8,400	30⅞	31	28½	28⅞	— 2⅛
85	51¼	64¾	43	(sh) 209,180	N.P.	American Republics Corp.	....	.....	1,900	44⅛	44½	†43	43	— 2
53⅜	37½	47¼	40	$56,000,000	$25	Associated Oil	50cQ	June 30, 29	140	44½	44½	44½	44½	0
62½	50	77⅞	53½	50,000,000	25	Atlantic Refining	‡25cQ	June 15, 29	99,700	67¼	68	63½	65⅝	— 1¾
						do pfd.	$1.75Q	May 1, 29						
118¼	114½	117⅝	114	20,000,000	100	Barnsdall Corp. A.	50cQ	May 6, 29	57,900	38¾	39½	†36½	38	— 1
53	20	49⅛	36½	47,261,125	25	do B.	50cQ	May 6, 29						
51⅛	20	49	38⅛	300,525	25									
24½	12¼	29½	20	(sh) 956,075	N.P.	Beacon Oil	....	.....	15,000	30	31¼	28¼	29¼	— 1¼
36	25¼	30	25	$51,524,150	$25	California Petroleum	....	Jan. 1, 29						
....	....	35⅞	30⅛	(sh) 4,634,163	N.P.	Continental Oil (Delaware)	....	.....	29,500	32⅝	32⅝	†30⅛	30¼	— 2⅜
94⅞	68	91½	63	21,031,400	100	General Asphalt	....	.....	394	89½	*91½	86⅞	89¼	— ⅛
141	110⅛	136	104½	6,628,200	100	do pfd.	$1.25Q	June 1, 29	300	135	*136	135	136	0
167	79	107	70½	25,000,000	100	Houston Oil	....	.....	7,100	76	78½	72¼	78½	+ 1
38⅜	21¾	39¼	30	(sh) 1,333,157	N.P.	Independent Oil & Gas	50cQ	Apr. 30, 29	38,100	33⅞	33⅞	30⅝	31¼	— 2¼
39⅝	9	52⅝	29	$4,299,190	$10	Indian Refining	....	Dec. 15, 20	92,900	41⅞	47½	40¼	46	+ 4⅞
37¼	8½	48¾	28	4,550,110	10	do ctfs.	....	.....	46,000	40¼	45⅛	38¼	44	+ 4
185	140	165	160	1,977,700	100	do pfd. new	$1.75Q	July 1, 29						
39⅛	27⅜	38⅜	26	3,992,387	N.P.	Lago Oil & Transport	....	May 2, 27	2,400	33	34½	33	33½	— 1½
19¾	9⅜	18	11¼	(sh)1,187,298	N.P.	Louisiana Oil Refining	....	.....	17,200	11⅝	11⅝	†11¼	11¼	— ½
96	78	100	89	$4,000,000	$100	do pfd.	$1.62½	May 15, 29	80	92	92⅛	92	92	0
25½	12½	18½	12	(sh) 330,000	N.P.	Maracaibo Oil	....	.....	5,400	14½	16⅛	14	16	+ ¾
49¾	33	47⅛	33⅛	(sh)2,316,897	N.P.	Marland Oil Co.	....	Mar. 31, 27	.....	....	....	....	....	.....
360	250	295	205	$45,942,800	$100	Mexican Petroleum	$3Q	July 20, 29	.....	....	....	....	....	.....
....	....	....	....	12,000,000	100	do pfd.	$2Q	July 20, 29	.....	....	....	....	....	.....
73	45⅝	69¾	36¼	(sh) 995,500	N.P.	Mexican Seaboard	....	Nov. 15, 24	49,700	40	41¼	36¼	40⅜	+ ⅛
44½	25⅛	39⅞	30½	(sh) 1,857,461	N.P.	Mid-Continent	50cQ	May 15, 29	13,300	32½	33	31¾	33	+ ½
120½	103¼	121	120¼	$6,718,000	$100	do pfd.	$1.75Q	June 1, 29	.....	....	....	....	....	.....
7⅜	2⅜	5⅛	3¼	23,849,720	10	Middle States	....	July 1, 23	5,200	3½	3⅝	†3¼	3¼	— ¼
5⅞	1½	3½	2¼	5,950,500	10	do ctfs.	....	.....	400	2⅜	2½	2¼	2¼	0
2¼	1	1½	1	(sh)3,500,000	N.P.	Pacific Oil	....	.....	11,000	1	1⅛	1	1	0
55½	38¼	63	41⅛	$50,000,000	$50	Pan American P. & T.	....	Oct. 20, 27	25,900	62	62½	59½	60	— 2
58⅞	37⅞	66¾	40½	121,101,400	50	do B.	....	Oct. 20, 27	114,800	63	63⅝	59⅜	60	— 3½
28⅜	15½	17½	13¾	(sh) 400,000	N.P.	Pan American Western B.	....	Jan. 30, 27	70	13⅞	13⅞	13¾	13¾	— ⅛
21¾	11½	15¼	8½	(sh) 199,370	N.P.	Panhandle P. & R.	....	.....	1,200	9⅛	9⅛	†8½	8½	— ½
106¼	70	76	47½	$2,935,200	$100	do pfd.	....	July 2, 23	500	55	55	55	55	0
53⅞	35¼	47	35½	(sh)2,406,803	N.P.	Phillips Petroleum	37½cQ	July 1, 29	19,000	36⅛	37⅞	35¾	37⅛	— ⅝
5¼	½	3⅜	1⅞	$29,622,925	$25	Pierce Oil	....	.....	5,000	2	2	†1⅞	2	0
50	16¼	51½	30	15,000,000	100	do pfd.	....	Feb. 1, 22	300	38	38	38	38	0
6⅝	3½	5⅞	4	(sh)2,500,000	N.P.	Pierce Petroleum	....	.....	11,100	4⅛	5¼	4⅛	4⅜	+ ⅝
64⅝	59½	65⅝	51¼	$60,636,450	$25	Prairie Oil & Gas	....	Aug. 31, 27	12,000	53	53⅛	†51¼	52	— 1
....	....	61⅞	53⅝	101,250,000	25	Prairie Pipe Line	‡75cQ	June 30, 29	4,100	60¼	60½	60	60	— ⅜
29⅞	16	25⅞	15⅛	37,450,850	50	Producers & Refiners	....	Sept. 15, 23	1,600	17	17	†15⅛	15⅞	— 1⅛
49⅜	41	45¾	37¼	2,845,350	50	do pfd.	....	May 1, 25	390	39	39	†37¼	38⅛	— ⅝
31¼	19	30¾	23½	75,959,255	25	Pure Oil Co.	37½cQ	June 1, 29	20,100	26	26½	25½	25⅝	— ⅝
119	108	115½	111½	13,000,000	100	do 8% pfd.	$2Q	July 1, 29	140	113⅛	113¼	112	112¼	— 1
56	23½	49⅝	39¾	47,127,725	25	Richfield Oil	50cQ	May 15, 29	15,900	40⅜	40⅝	†39¾	40	— ½
....	....	42½	27½	(sh) 1,200,000	N.P.	Rio Grande Oil Co.	‡$1S.A.	July 25, 29	38,100	28½	30⅞	†27½	28¼	+ 1¼
64	44⅝	55¾	31¾	(sh) $46,646	$13.40	Royal Dutch N. Y. shares	$1.336	Feb. 8, 29	3,400	53⅞	54⅜	53¼	54⅛	+ ⅛
57½	39⅜	55⅜	43	(sh) 65,203,000	£2	Shell Transport & T.	96.4c	Feb. 8, 29	.....	....	....	....	....	.....
39⅜	23¼	31¾	26	12,254,979	N.P.	Shell Union Oil	35cQ	July 1, 29	13,600	26⅜	26⅝	26	26⅜	— ⅛
27¼	18⅛	39⅜	18¼	$8,357,280	$10	Simms Petroleum	40cQ	June 15, 29	42,900	37¾	37¾	34⅛	34⅜	— 3⅛
46¾	17⅜	45	33	5,494,095	N.P.	Sinclair Consolidated	‡50cQ	July 15, 29	154,400	35¼	35¾	†33	34	— 1½
110	102½	111	107¾	$16,025,200	$100	do pfd.	$2Q	May 15, 29	700	110	110	110	110	+ ¼
42⅝	25	46½	32⅞	27,396,590	25	Skelly Oil Co.	50cQ	June 15, 29	32,800	41⅝	42½	40⅛	41½	— ¼
80	53	81⅞	64	(sh) 13,016,435	N.P	S. O. California	62½cQ	June 15, 29	65,300	73	73¼	70⅛	71	— 1⅞
59¾	37¾	62⅜	48	$612,095,850	$25	S. O. New Jersey	‡25cQ	June 15, 29	79,900	57¾	57⅞	56⅛	56¾	— ⅞
45½	28¾	45¾	38⅝	434,094,575	25	S. O. New York	40cQ	June 15, 29	62,900	40¼	40¼	38¾	39¼	— ¾
77	31½	75	57	(sh) 1,297,847	N.P.	Sun Oil	25cQ	June 15, 29	2,500	75	75	73	73	— 1⅞
110	100	105½	100	$5,000,000	$100	do pfd.	$1.50Q	June 1, 29	320	101	102	100	102	0
14¼	2½	12	7	(sh) 1,304,698	N.P.	Superior Oil Corp.	....	Dec. 20, 20	29,400	7⅜	7½	7	7⅛	— ⅜
74¾	50	68½	57¼	$211,082,925	$25	The Texas Corp.	75cQ	July 1, 29	53,500	61⅝	63½	61⅜	62⅝	+ ¼
26⅝	12⅛	23⅞	15⅛	8,380,340	10	Texas Pacific Coal & Oil	2½%s	June 30, 29	19,200	16⅛	16⅞	†15⅛	16⅛	— ⅛
41½	19⅝	38½	27⅛	(sh) 2,179,275	N.P.	Tide Water Oil Co.	20cQ	June 30, 29	.....	....	....	....	....	.....
100¼	86¾	97½	89¾	$20,321,000	$100	do 5½% pfd.	$1.25Q	May 15, 29	1,100	91	91	90	90⅛	+ ⅜
25	14¾	23½	17½	(sh) 4,877,976	N.P.	Tide Water Associated	....	Aug. 1, 27	47,800	20½	20½	19⅛	19⅜	— 1⅛
91¾	81⅞	90	84	$72,989,200	$100	do pfd.	$1.50Q	July 1, 29	1,500	86¼	87⅜	85	87⅜	— ⅛
14½	6¾	13	9	(sh) 3,842,029	N.P.	Transcontinental Oil	....	.....	2,200	12⅜	12½	10⅝	11½	+ ½
58	42¾	54½	46	$40,858,375	$25	Union Oil of California	50cQ	May 10, 29	7,200	47⅛	47¼	46¼	46⅝	— ⅞
128⅛	110	152	121⅞	31,101,200	100	Union Tank Car Co.	$1.25Q	June 1, 29	1,000	146	147½	145	146½	— 3
44⅞	26	42⅞	28½	(sh) 488,359	N.P.	Warner Quinlan	50cQ	July 2, 29	9,600	31½	31⅞	29¾	29¾	— 1¾
38	20⅛	37⅞	30¼	(sh) 490,000	N.P.	White Eagle Oil & Refining	50cQ	July 20, 29	4,600	34½	34½	33½	33½	— 1
22⅛	17¼	29¾	17¼	(sh) 428,967	N.P.	Wilcox Oil & Gas	....	May 10, 28	2,600	18⅛	18½	†17¼	17½	— ⅝

*New High †New Low XEx-dividends ‡Also extras s-Stock Total Sales 1,410,634

Pittsburgh Stock Exchange

Transactions Week Ended July 26, 1929

	Sales	High	Low	Last	Change
Ark. Nat. Gas	33,488	17	13¾	15⅞	—⅝
do pfd.	6,126	8½	8⅛	8⅛	— ⅛
Devonian Oil	160	10	9⅞	9⅞	— ⅛
Dixie Gas & Util.	120	16	16	16	0
Lone Star Gas (old)	40	*94	94	94	+6
do (new)	1,230	37¾	37	37½	....
Phoenix Oil pfd.	800	.40	.40	.40	0
Plymouth Oil	940	24	23⅞	24	+ ⅞
Unlisted					
Lone Star w.i.	5,145	38½	36½	37	—1½
Rights					
Col. Gas & Elec.	647	6½	6½	6½	....
Lone Star	4,741	7⅞	7	7⅛	— ⅜

Pittsburgh Curb Market

Transactions Week Ended July 26, 1929

	Sales	High	Low	Last	Change
Ark. Gas "A"	2,918	17⅛	13¾	15¾	....
Leonard Oil & Dev	100	5	5	5	....
States Oil	200	3	3	3	....

Tank Wagon Tables

(Continued from Page 117)

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

	Gasoline T.W. Tax	Gasoline T.W.	Gasoline S.S.	Oil T.W.
ONTARIO				
Toronto	20.5	5	25.5	29	21
Ottawa	14.5	5	19.5	23	21
Cochrane	25.5	5	30.5	..	26
Ft. William	23.5	5	28.5	32	23.5
MANITOBA					
Winnipeg	22.5	3	25.5	29	22.5
SASKATCHEWAN					
Regina	27	3	30	34	27
ALBERTA					
Edmonton	28.5	5	33.5	37	28.5
Calgary	24.5	5	29.5	33	24.5
BRITISH COLUMBIA					
Vancouver	23	3	26	30	24
QUEBEC					
Montreal	21.5	5	26.5	30	22
Quebec City	22.5	5	27.5	31	23
Three Rivers	22.5	5	27.5	31	23
NEW BRUNSWICK					
St. John	25	5	30	34	25
Moncton	25	5	30	34	25
NOVA SCOTIA					
Halifax	25	5	30	34	25
Sydney	25	5	30	34	25
PRINCE EDWARD ISLAND					
Charlottetown	25	5	30	34	25

Note: In districts surrounding these points 1c additional is added to city price.

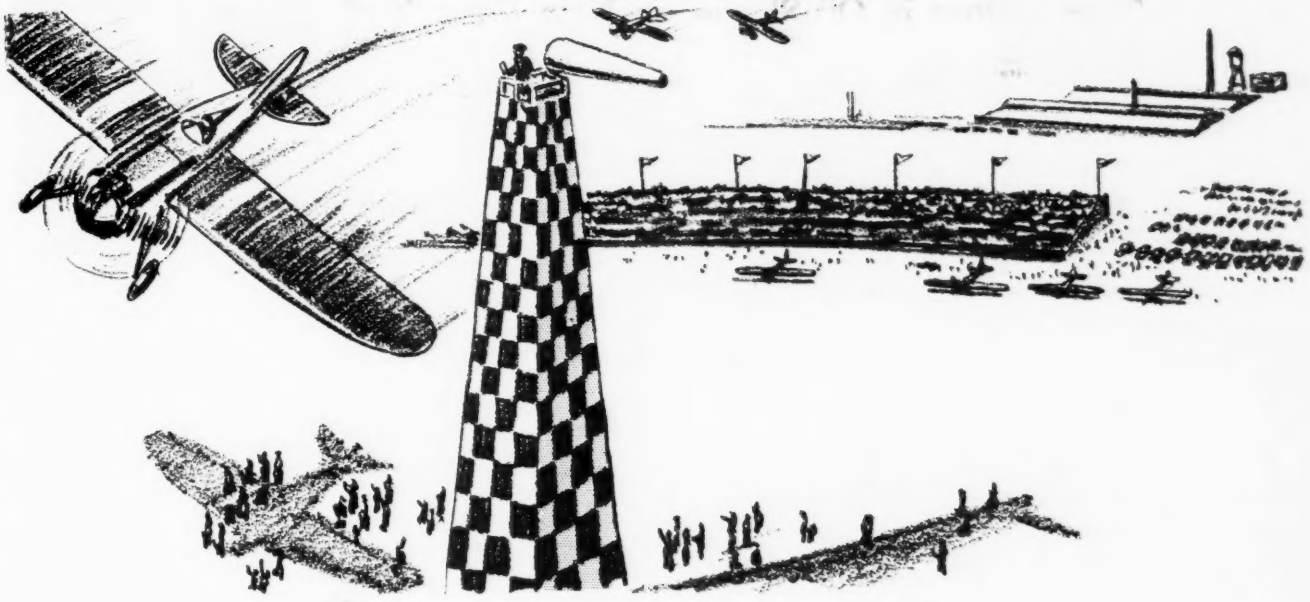
Cleveland Stock Market

July 26	Par Value	Bid	Asked
Canfield Oil Co.	$100	...	143
do pfd.	100	103	...
Fred G. Clark	10	13⅝	14½
National Refining	25	...	35
do pfd.	100	...	135
Paragon Refining	25	20½	23
do pfd.	N.P.	41½	43
do ctfs.	..	21	22

Can Deduct Gas Tax From Income Tax

RICHMOND, Va.—The Internal Revenue Bureau at Washington recently ruled that the 4-cent per gallon gasoline tax in North Carolina which was in effect in 1928 is deductable in the income tax returns of the consumers who pay the tax and to whom it is not refunded.

The bureau, which made the ruling upon request, also held that, if the tax is made as part of the business expense of such consumers, it cannot be deducted separately as a tax.



Its extra PRECISION that decides records . . .

Imperial

QUALITY PRODUCTS

GASOLINES
U. S. Motor
High Test
High Compression
Aviation
KEROSENES
TRACTOR FUELS
FURNACE OILS
GAS OILS
FUEL OILS
ROAD OILS
LUBRICATING OILS

Records are broken and new ones established by expert pilots due to the extra precision demanded in every step from the drafting board, through the factory to the day the ship takes to the air.

This extra precision is characteristic of every step in the refining of Imperial Quality Products insuring the unexcelled high quality that has established the reputation back of the name IMPERIAL . . .

Imperial Refineries

Imperial Refining Co. San Angelo Refining Co.
Kettle Creek Refining Co. Wickett Refining Co.

General Offices
TULSA, OKLAHOMA

Standard Oil Stocks on New York Curb

1928 High	1928 Low	1929 High	1929 Low	Outstanding Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended July 27 Sales	First	High	Low	Last	Change
22⅜	14⅞	18¾	14¼	£4,126,460	£ 1	Anglo-American Oil	36c	June 5, 29	2,500	14⅝	15	14⅝	15	+ ⅜
21¼	15	18	13	.....	....	do certificates	36c	June 5, 29	300	13	13	†13	13	0
20½	14⅜	17	13	.....	L 1	do cts. non-voting	36c	June 5, 29	1,000	14⅜	14⅜	14⅜	14⅜	— ⅛
5	1¼	2⅜	1⅛	(sh) 500,000	N.P.	Atlantic Lobos	.....	.....	200	1½	1¼	1¼	1¼	0
9¾	3¼	4⅛	1½	$10,000,000	$50	do pfd	.....	.....	.....	.....	.....	.....	.....	.....
56	44½	46½	32	$1,000,000	25	Borne-Scrymser	‡$1S.A.	Apr. 15, 29	50	35	35	†32	32	— 3
76	58	74¼	58⅝	10,000,000	50	Buckeye Pipe Line	‡$1Q	June 15, 29	.....	.....	.....	.....	.....	.....
161	117¼	193⅜	140⅛	3,000,000	25	Chesebrough Mfg	‡$1Q	June 30, 29	100	177	177	177	177	—11
23	16	29	17⅛	36,123,350	10	Continental Oil	.....	Dec. 15, 27	3,900	19⅜	19⅜	18⅛	18⅛	— 1¼
17½	9½	11⅜	7⅜	.....	N.P.	Creole Petroleum	.....	.....	8,400	7⅞	7⅞	7½	7¾	— ¼
82	67	75¾	62	1,500,000	50	Cumberland Pipe Line	$1Q	June 15, 29	.....	.....	.....	.....	.....	.....
88	64⅛	70½	56	5,000,000	100	Eureka Pipe Line	$1Q	June 1, 29	.....	.....	.....	.....	.....	.....
13	4¼	6⅝	5	16,000,000	100	Galena Signal Oil	.....	June 30, 25	400	5⅜	5⅜	5⅛	5⅛	0
86	26	90	73½	4,000,000	100	do new pfd	....	June 30, 26	.....	.....	.....	.....	.....	.....
89¾	35	88	73½	2,000,000	100	do old pfd	....	June 30, 26	.....	.....	.....	.....	.....	.....
114¾	59¼	126⅞	89⅜	73,685,700	25	Humble Oil & Refining	‡30cQ	July 1, 29	12,800	121¾	123	118⅜	119⅞	— 2¼
290½	176½	340½	285	20,000,000	100	Illinois Pipe Line	$10S.A.	June 15, 29	250	306¼	306¼	306	306	— 3½
104	56¾	119⅝	88	(sh) 6,605,442	N.P.	Imperial of Canada	12½cQ	June 1, 29	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	do new	.....	.....	6,800	29½	29⅞	28⅞	29½	0
91⅞	74⅜	106½	81¼	$5,000,000	$50	Indiana Pipe Line	‡$1Q	May 15, 29	2,800	106	106	106	106	— ½
.....	.....	.....	.....	.....	.....	do new	.....	.....	800	28⅜	28½	28¼	28⅜	+ ⅛
55	35	65½	46⅜	(sh) 7,123,544	N.P.	International Petroleum	12½c	June 25, 29	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	do new	.....	.....	12,800	25⅝	26	24⅞	25	— ⅞
32⅜	19⅜	25⅞	21⅜	$6 363,350	12.50	National Transit Co	25cQ	June 15, 29	300	22⅝	22⅞	22½	22½	— ¼
75	38½	85	72	5,000,000	100	New York Transit	....	July 15, 26	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	do new	.....	.....	.....	.....	.....	.....	.....	.....
69	56½	63	52	2,000,000	50	Northern Pipe Line	$2S.A.	July 1, 29	200	54	54	54	54	— 4½
83½	58½	75⅜	64⅜	60,000,000	25	Ohio Oil Co	50cQ	June 15, 29	400	70⅞	70⅞	70	70¼	— ¼
84	28	44½	23⅛	10,000,000	25	Penn Mex. Fuel	75c	Dec. 16, 28	1,400	33⅞	36⅞	32	33½	+ 1½
220	167	50	36⅝	4,000,000	25	Solar Refining	$1.25S.A.	June 20, 29	200	36⅝	36⅝	†36⅝	36⅝	0
19	12	22½	13	1,000,000	10	Southern Pipe Line	$1	Mar. 1, 29	6,300	15½	16	14½	15	— 1
71⅞	36¾	60¼	40⅜	30,000,000	25	South Penn Oil	50cQ	June 30, 29	900	52	52	51	51	— ⅞
102	70	70	62¾	1,750,000	50	South West Pa. Pipe Lines	$1	July 1, 29	.....	.....	.....	.....	.....	.....
95⅞	70⅞	103¼	53⅛	348,175,069	25	S. O. Indiana	62½cQ	June 15, 29	47,600	55¼	55½	†53⅛	53¾	— 1⅞
27¾	15	21⅞	18	8,000,000	25	S. O. Kansas	....	June 16, 24	1,300	19½	20	19⅛	20	0
49	44	45¼	35⅛	25,654,516	10	S. O. Kentucky new	40cQ	June 30, 29	3,300	37⅛	37⅜	36⅛	36⅛	— 1⅛
54⅝	39⅞	50¼	45½	4,649,225	25	S. O. Nebraska	‡62½cQ	June 20, 29	1,800	47⅛	49	47⅛	49	+ 1¾
134	71	129	110¼	14,000,000	25	S. O. Ohio	62½cQ	July 1, 29	600	119¾	119¾	118	119¾	+ 1½
125	116	124½	115	7,000,000	100	do pfd	$1.75Q	June 1, 29	300	117	117	117	117	0
23½	16	18	14	861,466	25	Swan Finch Co	30c	Jan. 15, 29	.....	.....	.....	.....	.....	.....
111	72	133¾	105½	126,154,000	25	Vacuum Oil	$1Q	June 20, 29	2,300	120⅞	121	118⅝	118⅝	— 1⅝

*New High †New Low ‡Also Extras

Independent Oils on New York Curb

1928 High	1928 Low	1929 High	1929 Low	Par Value	Stocks	Transactions Sales	Week Ended July 27 First	High	Low	Last	Change
1½	.53	.72	.375	$ 5	Amer. Cons. Oilfields	1,400	7/16	½	⅜	7/16	0
9½	3⅛	8⅝	3½	N.P.	Amer. Maracaibo	4,900	4⅝	4⅝	4	4	— ½
4½	2¼	5	1⅞	$ 10	Argo Oil	300	2	2⅛	2	2⅛	+ ⅛
3¾	3⅜	17⅜	3¾	N.P.	Arkansas Nat. Gas	98,500	17⅛	17⅛	13⅝	16¾	— ½
.....	.....	17⅜	6¾	N.P.	do A	78,500	17⅛	17⅜	14⅛	16¾	— ½
.....	.....	9	7⅞	10	do pfd	400	8⅜	8⅜	8¼	8¼	0
55	32¾	62	50	N.P.	British American Oil	.....	.....	.....	.....	.....	.....
23⅞	3¾	4⅞	2⅝	25c	Carib Syndicate	3,800	3⅞	4	3⅜	3⅜	— ½
.....	.....	48	27¾	N.P.	Cities Service new	775,700	46¾	*48	42⅛	48	+ 1
103½	94½	98½	88⅜	100	do pfd	1,400	93½	94	93½	93⅞	— ⅛
9⅝	8⅞	9¼	8⅞	10	do pref. B	300	9	9	9	9	0
97	88½	96	92	100	do pref. BB	.....	.....	.....	.....	.....	.....
2¼	1	1½	⅝	1	Colombia Syndicate	12,100	⅞	1⅜	⅞	1	+ ⅛
17¾	9¾	15	6	N.P.	Colon Oil	200	8⅛	8¼	8	8	— ½
8⅞	6¼	11⅛	4⅞	10	Consolidated Royal	.....	.....	.....	.....	.....	.....
.....	.....	96⅞	45	N.P.	Cosden Oil Co	4,800	86⅜	*96⅞	81¾	94	+ 6
.....	.....	.....	.....	.....	do new	100	75	75	75	75	0
3¼	.76	2½	1⅛	N.P.	Crown Central	7,800	1⅜	1½	1¼	1⅜	+ ⅛
15	6¾	11⅞	8	N.P.	Crystal Oil	.....	.....	.....	.....	.....	.....
50	48	51⅛	51⅛	$100	do pfd	.....	.....	.....	.....	.....	.....
33½	8⅛	26	14	N.P.	Darby Petroleum	2,800	14⅜	14⅞	14	14	— 1
13½	7⅞	.....	.....	.....	do trust ctfs	.....	.....	.....	.....	.....	.....
2⅞	1	10⅞	2	N.P.	Derby Oil & Refining	4,800	8½	9½	8¼	8¾	+ ⅛
21⅛	7½	44	20⅞	N.P.	do pfd	.....	.....	.....	.....	.....	.....
165	101⅛	202⅞	142⅛	$25	Gulf Oil Corp	8,400	190	193¾	184½	184½	— 7⅜
7½	5⅜	7½	3⅝	5	Homaokla Oil	2,900	4	4⅛	3⅞	4	0
3⅜	1	2⅞	1¼	10	Intercontinental Pet	7,000	1¼	1⅜	1¼	1⅜	+ ⅛
3	⅛	3⅜	1½	N.P.	Kirby Petroleum	5,400	1⅞	2½	1¾	2½	+ ¾
9⅜	5⅛	6⅛	2⅞	N.P.	Leonard Oil & Dev	12,800	5⅛	5½	4¾	5	— ¼
43⅜	20	38⅞	24¾	N.P.	Lion Oil & Refg	.....	.....	.....	.....	.....	.....
69½	48⅛	87	67	$25	Lone Star Gas	4,900	38¾	38¾	37	38	— 1
.....	.....	.....	.....	.....	do new	3,400	⅜	7/16	⅜	⅜	— 1/16
1⅞	.50	1¼	⅜	1	Magdalena Syndicate	.....	.....	.....	.....	.....	.....
48½	32	38½	21¼	N.P.	Margay Oil	.....	.....	.....	.....	.....	.....
40½	40½	.....	.....	$10	Mexican-Panuco	.....	.....	.....	.....	.....	.....
8	2¾	6⅜	3⅜	N.P.	Mexico-Ohio Oil	.....	.....	.....	.....	.....	.....
.74	.20	.....	.....	$10	Mexico Oil	.....	.....	.....	.....	.....	.....
.....	.....	42	15⅞	N.P.	Missouri-Kan. P. L	4,800	31⅛	31⅜	29⅞	30¾	+ ⅛
1¾	.76	1½	⅞	1	Mountain & Gulf	4,400	⅞	⅞	⅞	⅞	0
28⅞	19½	22⅞	12	10	Mountain Producers	4,200	13	13	12½	12½	— ¼
.....	.....	39½	24¾	N.P.	Nat. Fuel Gas (new)	14,400	36⅞	*39½	36⅞	38¼	+ 1½
5⅝	4¼	5	3¼	5	New Bradford	100	3¼	3⅝	3¼	3⅝	+ ⅛
5½	3	3½	3	10	New England Fuel	700	3	3	3	3	0
11¾	7⅛	9⅜	5½	1	New Mex. & Ariz	100	5⅝	5⅝	5⅝	5⅝	— ⅜
15½	11½	24½	16	25	New York Petrol	800	18	20⅜	18	20⅜	+ 3⅜
40	39⅜	.....	.....	.....	North Amer. Oil Cons	.....	.....	.....	.....	.....	.....
13¼	8⅛	18⅜	8¾	N.P.	North Cent. Texas	2,000	13⅜	*18⅜	13	17¾	+ 4⅞
.....	.....	19¼	13	N.P.	Oil Stock, Ltd. A	400	14½	14⅝	13¾	14	— ¾
.....	.....	18¼	14⅛	N.P.	do B	200	14½	15	14½	15	+ ⅞
26¼	20	23¼	15½	N.P.	Pacific Western Oil	700	16	16	15⅛	16	+ ¼
6	2¼	3½	1⅜	N.P.	Pandem	200	1⅝	1¾	1⅜	1⅝	+ ¼
15⅝	8½	10¼	6	N.P.	Pantapec	500	6	6⅜	6	6¼	0
20	10⅜	25½	22½	$25	Paragon Refg. B. ctfs	.....	.....	.....	.....	.....	.....
.09	.04	.....	.....	N.P.	Peer Oil Corp	.....	.....	.....	.....	.....	.....
7¾	4⅞	7⅜	4⅜	$10	Pennok Oil	.....	.....	.....	.....	.....	.....
.....	.....	34½	26½	N.P.	Petroleum Corp	2,500	27⅞	28	27	27⅜	— ⅜
5⅜	3⅛	.....	.....	$ 5	Pittsburgh Oil & Gas	.....	.....	.....	.....	.....	.....
31⅜	26½	30	22	N.P.	Plymouth Oil	200	23½	23½	22⅞	22⅞	— 1
18	8	16	11⅛	25	Red Bank Oil	.....	.....	.....	.....	.....	.....
13	4⅛	8⅛	4½	N.P.	Reiter-Foster	800	5⅛	5½	4⅝	5⅛	— ⅛
31½	23¼	25½	23⅞	$25	Richfield pfd	.....	.....	.....	.....	.....	.....
.....	.....	29	23	.....	Root Refining pfd	200	25	25¼	24½	25	0
12	4⅝	11	6¼	N.P.	Ryan Consolidated	300	6	6	6	6	— ½
7¼	5½	5⅞	2⅜	$10	Salt Creek Cons	400	2¾	3⅜	2⅝	3⅛	+ ¾
35	23¼	25⅞	14⅜	10	Salt Creek Prod	200	15¼	16	15	15	+ ⅜
3½	1	2½	1⅜	5	Savoy Oil	200	1½	1½	1½	1½	0
40	27	33⅛	32	25	Shreveport El Dorado	.....	.....	.....	.....	.....	.....
.....	.....	24	16¾	N.P.	Southland Royalty	1,100	17	17⅜	17	17⅛	+ ⅛
.....	.....	23	12⅝	N.P.	Texon Oil & Land new	2,500	14⅞	16	14⅝	15¼	+ ⅝
22⅞	13	16⅞	11⅝	$10	Tidal Osage	.....	.....	.....	.....	.....	.....
21¼	13⅜	16½	10⅛	10	do not-voting	.....	.....	.....	.....	.....	.....
93¾	75	145	80	100	Transcontinental pfd	.....	.....	.....	.....	.....	.....
74¼	18	71½	66	10	Venezuela-Mexico	.....	.....	.....	.....	.....	.....
9⅛	4¾	6½	3½	5	Venezuelan Petrol	1,800	3½	3¾	3½	3½	0
8¼	4⅞	9⅛	4⅞	1	Woodley Petroleum	100	4½	4½	4½	4½	+ ¼
⅜	⅜	5⅜	1	25	Y Oil & Gas	500	1½	1½	†1	1	— ⅜

*New High †New Low

New York Curb Bonds

Week ending July 26, 1929

	High	Low	Last	Change
Beacon Oil 6s '36	123	122	122⅞	— ⅛
Cities Serv. 5s '66	85	82½	84¾	— ¼
Cities Serv. G 5½s '42	87½	87	87	— ¼
Cities Serv. G. P. 6s '43	93	92⅞	93	0
Cont. Oil 5¼s '37	94	93	94	+1
Empire O & R 5½s '42	87¾	86¾	87½	+ ¼
Gulf Oil 5s '37	99	98¾	99	0
Gulf Oil 5s '47	100	99¾	99¾	— ¼
Indep. Oil 6s '39	108¾	106	106	—2½
Richfield Oil 6s '44	102¼	101	101½	— ¾
Sun Oil 5½s '39	99¾	99¼	99¼	— ½

New York Bonds

Week Ending July 26, 1929

	High	Low	Last	Change
Atlantic Refg. deb. 5s	101¾	100½	100½	—1¼
Cal. Pet. 5s	96	95½	95½	—1¼
Cal. Pet. 5½s	99⅝	98½	99½	0
General Asphalt 6s	107½	106	107¼	—1½
General Pet. 5s	101	101	101	0
Humble Oil & Refg. 5s	100	100	100	0
Humble Oil & Refg. 5½s	100⅝	100¼	100¼	— ⅜
Pan Amer. 6s	110⅛	108	108	—1½
Pan Amer. 6s	97	95¼	96⅞	+1⅜
Phillips Pet. 5½s	89	88	88½	— ¾
Pure Oil 5½s	98	97¼	98	0
Shell Union Oil 5s	96	94¼	95	—1
Simms Pet. 6s	99½	99½	99½	0
Sinclair Con. Oil 7s	102	101	102	+ ¼
Sinclair Con. Oil 6½s	100	99¼	100	+ ¼
Sinclair Con. Oil 6s D	99¼	98¾	98¾	+ ⅝
SinclairCon.OilCrude5½s	96½	95½	96	0
Sinclair Pipeline	93¾	93⅜	93⅝	0
Skelly Oil 5½s	92¼	91	91	—1
S. O. N. Y. 4½s	95¼	94¾	95	— ⅝
S. O. N. J. 5½s	101½	100¾	101½	0
Union Oil of Calif. 6s A	107	105½	105½	—1
Union Oil of Calif. 5s C	96¾	95¾	96½	— ½
White Eagle Oil 5½s	99½	98	98	—1¼